# Comparison of bracket transfer accuracy of 3 indirect bonding tray methods in maxillary teeth having varying displacements and rotations – An in vitro study

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**Comparison of bracket transfer accuracy of 3 indirect bonding tray methods in maxillary teeth having varying displacements and rotations – An in vitro study**

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## ABSTRACT

**Objective**: To measure and compare bracket transfer accuracy of 3 indirect bonding techniques in maxillary arches with varying amounts of crowding and tooth rotations.

**Materials and Methods:** Three indirect bonding techniques (double PVS, double vacuum form, PVS putty) were studied on four master models (master models FL-M, FL-S, MD-M and MD-S) of moderate and severe amounts of facio-lingual displacement and rotations. For each technique, 144 brackets were bonded to 12 working models. IDB trays were fabricated and the brackets were transferred to 12 patient models. Bracket positions before and after the transfer were measured and recorded in mesio-distal and occluso-gingival directions utilizing a digital camera, and in facio-lingual direction utilizing a digital caliper. One way ANOVA with *post hoc* Tukey test was done to compare the effects of arch length discrepancy, tooth rotations, and tray material on bracket transfer accuracy.

**Results:** PVS-P showed the most statistically significant differences in bracket position between working and patient models. DVF had significant differences in rotation models. D-PVS was also more affected by tooth rotations than facio-lingual displacement. When 4 master models were compared, moderate facio-lingual displacement (FL-M) had the most statistically significant difference in bracket positions. When 3 different techniques were compared, PVS-P was significantly less accurate than D-PVS in master model FL-S and less accurate than DVF in master model FL-M in facio-lingual direction.

**Conclusions:** PVS-P was the least accurate method than all other techniques in all master models except the severe rotation model. D-PVS and DVF had comparable bracket transfer accuracies although DVF was more significantly affected by tooth rotations.

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## INTRODUCTION

Indirect bonding technique was first described by Silverman et al. in 1972.[1] As opposed to direct bonding (DB), indirect bonding technique (IDB) requires a transfer tray to bond brackets onto patient's teeth. The orthodontist places the brackets in ideal positions on a stone model and subsequently transfers the brackets to the patient's mouth utilizing a transferring tray.

Orthodontists have several options when choosing an IDB tray material and the trays are usually composed of either a dual material system consisting of a soft inner and a hard outer layer combination or a single silicone tray material.[2] Different indirect bonding tray methods may not provide equal bracket transfer accuracy.[3,4] Inaccuracies may be caused by different physical properties inherent to the tray materials. It has also been shown that the properties of the IDB tray material may contribute to bracket bond strengths and bond failures.[5] Because the physical properties of different tray materials may be affected by thickness of the materials and shape constraints, it is reasonable to expect that fabrication of IDB trays over dental arches with varying amounts of rotations and displacements may potentially result in differences in accuracy of bracket transfers.

There have been two published studies that measured bracket transfer accuracy between various IDB tray methods.[3,4] However, they used well-aligned dental arches to compare various IDB tray materials. To date there have been no studies comparing different IDB trays in the presence of facio-lingual displacement and tooth rotations, a condition that is more representative of typical clinical conditions. The dimensions of an IDB tray material may change with various amount of tooth displacements and potentially affect the accuracy of bracket transfer.

The purpose of this study was to measure and compare the bracket transfer accuracy of three IDB techniques in dental arches with moderate and severe rotations and facio-lingual displacements. The hypothesis was that bracket transfer accuracy would decrease with increased facio-lingual displacements and rotations.

## MATERIALS AND METHODS

This study was a continuation of the study by Castilla et al.[2] and it was conducted in the laboratory setting at the Oregon Health & Science University, Department of Orthodontics. Three different IDB tray materials were studied (Table 1). These tray materials were selected to further investigate their bracket transfer accuracies as the silicone-based tray methods have been reported to have high accuracy and vacuum form tray method had low accuracy.[3]

### Fabrication of Master Models

The master model used by Castilla et al.[3] was duplicated 4 times in order to fabricate four diagnostic wax setups. These four wax setups were divided into 2 facio-lingual displacements and 2 rotation models of different severities. A modified Little's Irregularity Index[6] was used to measure the amount of tooth size arch length discrepancy for anterior and posterior teeth combined in each master model. Proffit[7] definition was used to further categorize the master models into two different severities (moderate and severe) for each malocclusion type (facio-lingual displacement and rotation) (Table 2 and Figures 1-4). Facial reference notches used in the Castilla et al.[3] study were filled in with orthodontic stone (White ISO Type 3, Whip Mix, Louisville, KY) because they were not used in this study. The notch on the mid-lingual surface of each tooth was re-drilled using a #6 carbide round bur for the purpose of measuring the facio-lingual position of each bracket. A commercial laboratory (Excel Orthodontics, Inc., Tigard, OR) made four resin-based master models from the wax setups. Silicone molds were made (Excel Orthodontics, Inc., Tigard, OR) to allow duplication of the master models.

**Fabrication of Working and Patient Stone Models**

Orthodontic stone (White ISO Type 3, Whip Mix, Louisville, KY) was poured into each of the four silicone molds 18 times. For each master model (FL-M, FL-S, MD-M, and MD-S), the stone replicas were divided into 3 groups of 6 models (1 group for each technique). Each group of 6 was then further divided into 3 "working models" to which the brackets were initially bonded and 3 "patient models" to which the brackets were transferred. Because 12 brackets were examined on each working/patient model pair, a total of 144 brackets were examined per technique (Figure 5).

**Indirect Bonding Technique**

Bracket positioning was studied from maxillary right first molar to maxillary left first molar. Prior to bonding, separating medium (Al-Cote®, Dentsply International, York, PA) was diluted with water (1:1) and applied evenly around the buccal, occlusal, and lingual of the teeth. Each cast was allowed to dry for at least 1 hour. Adhesive pre-coated brackets (APC II Victory Series™, 3M Unitek, Monrovia, CA) were placed on each tooth in ideal positions[8] and light cured using a VALO® LED Curing Light (Opal Orthodontics, South Jordan, UT) for at least 20 seconds for each tooth. Three IDB trays (Figure 6) were fabricated over their corresponding working models following the protocol provided by publications describing each technique.[9-11] The double vacuum form trays were made using a Biostar® VI Positive Pressure Thermal-Forming unit (Great Lakes Orthodontics, Tonawanda, NY). Once the tray materials set, the working model-tray assemblies were soaked in water for at least 1 hour to dissolve the separating medium and ease the removal of the trays. Following removal, the trays with brackets were cleaned using a detergent solution as described by Sondhi.[11] If any stone material attached to the custom

composite bracket pads, it was sandblasted lightly with fine aluminum oxide (50μm). Each tray was transferred onto the corresponding patient model. For each IDB transfer, a two-part (A and B) chemically-cured adhesive was used (Sondhi™ Rapid-Set Indirect Bonding Adhesive, 3M Unitek, Monrovia, CA). Part A was applied to the facial surfaces of patient model's teeth and Part B to the custom composite pads on the back of the brackets. Each tray was carefully seated in a posterior to anterior motion. Trays were held snugly against the patient models for 2 minutes before removal.

**Photographic Measurements: Mesio-distal (X) and Occluso-gingival (Y) Bracket Positions**

To photograph each bracket for measurement of mesio-distal (X) and occluso-gingival (Y) bracket positions, a Nikon D70 camera with a 105-mm Micro lens set on manual with an F-stop of 40 at1:500 of a second (Nikon, Tokyo, Japan) and ring flash (Macro Speedlight SB-29, Nikon) set at M1/4 illumination was used. The photograph jig used by Castilla et al.[3] was modified for this study by fixing the ruler horizontally on the edge of the model stand base occlusal to the bracket to be measured. The ruler served as a fixed reference point around which a coordinate system could be created for measurement purposes. Forty-eight acrylic positioners were custom-made for each tooth in the arch. Each positioner was made to position the face of the bracket parallel to the camera's lens (Figure 7). Each bracket was photographed one time and pictures were saved in JPEG format at 300 dpi.

To measure the bracket positions, each image was opened using ImageJ 1.48 software (http://imagej.nih.gov/ij/) and magnified 400 percent of its original size. To calibrate each image, the software was used to draw a 10 mm line across the upper border of the ruler. An x-y coordinate system was created by setting the origin at the 40 cm mark on the ruler in each image. Two points (A and B) were selected on each bracket where point A was located at the intersection

between the inner surface of left occlusal tie wing with the horizontal line occlusal and perpendicular to the bracket scribe line and point B was located at the intersection between the inner surface of right occlusal tie wing with the horizontal line occlusal and perpendicular to the bracket scribe line. For a molar tube, point A was located at the inner corner of the left occlusal tie wing and point B was located at the inner corner of the right occlusal tie wing (Figure 8). For each point, x (mesio-distal) and y (occluso-gingival) coordinate values were recorded to the nearest hundredth of a mm by investigator AW, measured three times, and then averaged. All x and y coordinates were positive values as the 40 cm origin point was located to the left and below the bracket.

**Caliper Measurements: Facio-lingual (Z) Bracket Position**

To measure facio-lingual position (Z), a digital caliper (ECCO-100795, US Dental Depot Inc, Ft Lauderdale, FL) was used. Two points (C and D) were selected on each bracket. Point C was located at the gingival end point of a bracket's vertical scribe line. Point D was located at the occlusal end point of the same vertical scribe line. For a molar tube, point C was located at the intersection of the gingival scribe line with the bracket base, mid-center between the hook and disto-gingival tie wing. Point D was located at the intersection of the occlusal scribe line with the bracket base, mid-center between the mesio-occlusal and disto-occlusal tie wings (Figure 8). The non-moving arm of the caliper was placed in the center of the lingual notch of each tooth while the moving arm was placed on either point C or D (Figure 9). These values were recorded to the nearest hundredth of a mm by investigator SL, measured three times, and then averaged.

Any bracket positioning error was calculated as the difference between bracket position on the working model and the patient model.

## STATISTICAL ANALYSIS

All evaluation of the data was carried out using JMP version 10 (SAS Institute Inc., Cary, NC). Multivariate linear regression analysis was done to measure the overall degree of association between 3 variables (master model type, IDB tray material, and individual tooth) on bracket transfer accuracy. One-way analysis of variance (ANOVA) with *post-hoc* Tukey test was performed to compare between 3 techniques, severity of malocclusions, all teeth grouped, anterior teeth, posterior teeth, right, and left sides in mesio-distal, occluso-gingival, and facio-lingual positions. To assess the intra-rater repeatability, paired t test and Pearson correlation coefficient (PCC) were calculated by selecting four arches randomly and re-measuring them in X, Y, and Z planes. Dahlberg formula was calculated to measure the method error. Boxplots were constructed to display the data distribution. Mean values and standard errors were calculated. P value $<.05$ was set to indicate significance.

Sample size for comparison of means was conducted using information from the study by Castilla et al.[3] The calculated sample size with significance level of 0.05 and confidence level of 95% was 73.22. In other words, the power analysis calculation yielded 73.22 teeth per tray method. To simplify, each IDB technique was repeated 3 times for each model type (n=3). This resulted in 144 teeth pre tray method (Figure 5).

## RESULTS

The data distribution and mean values are depicted in Figure 10.

### Method Error

The method error for the point A x coordinate was 0.096 mm, point A y coordinate was 0.155 mm, point B x coordinate was 0.087 mm, point B y coordinate was 0.183 mm, point C was 0.272 mm and point D was 0.304 mm.

### Debonded Brackets

Nine brackets debonded upon removal of the trays. One bracket was in D-PVS method (upper left second premolar) and 8 brackets (4 upper left first molars, 1 upper right first molar, 1 upper right canine, 1 upper right first premolar, 1 upper left second premolar) were in DVF method. All debonds were excluded from further analysis.

### Intra-Group Reliability Test

Pearson correlation coefficient (PCC) analysis showed that the 3 repeated measurements had high precision (range 0.99-1). The measuring ability of both raters (SL and AW) was highly reliable and repeatable (PCC ranged 0.98 to 0.99).

**Effects of 3 Variables (Master Model Type, IDB Tray Materials, and Tooth Type) on Bracket Transfer Accuracy in 3 Directions (X, Y, and Z)**

Based on multivariate linear regression analysis, varying master models and IDB tray materials showed a significant effect on bracket transfer accuracy in X, Y, and Z directions (Table 3). For the mesio-distal (X) direction, statistically significant differences in bracket transfer accuracy were found with varying master models and/or IDB tray materials. For the IDB tray material and master model variables combined, significant differences in bracket transfer accuracy were found for the mesio-distal (X) and facio-lingual (Z) directions. For the occluso-gingival (Y) direction, significant differences in bracket transfer accuracy were found only with varying master models (Table 3).

**Comparisons of Bracket Position Before and After IDB Transfer Within Each IDB Method and Master Model – Intragroup Differences (Table 4)**

PVS-P had the highest number of differences (22) that were statistically significant in the bracket position between patient and working models, although it did not show any in master model MD-S. Ten of the 22 significant differences were found in master model FL-M, followed by 8 in master model MD-M. Both of these models are of moderate severity. DVF had 15 statistically significant differences, but 12 of these were in rotation models. This was the highest differences compared to other silicone-based methods. Master model MD-M had the highest number of differences (20) that were statistically significant in bracket position between working and patient models. These were fairly evenly distributed among the 3 techniques and between anterior and posterior and right and left sides of the arch.

**Comparisons of 3 IDB Tray Techniques on Bracket Transfer Accuracy for each Master Model Type – Intergroup Differences (Table 5)**

DVF was significantly less accurate in the mesio-distal (X) direction compared to both silicone-based methods in master models FL-M and MD-M. PVS-P was significantly less accurate in facio-lingual (Z) direction than both D-PVS in master model FL-S and DVF in master model FL-M.

**Comparisons of 4 Master Model Types on Bracket Transfer Accuracy for each IDB Tray Technique – Intergroup Differences (Table 6)**

Bracket transfer accuracy for D-PVS and DVF was significantly lower in the mesio-distal (X) direction for master model FL-M versus all other master models. For PVS-P, bracket transfer accuracy was significantly lower in master model FL-M compared to both rotation master models (MD-S and MD-M) in the occluso-gingival (Y) direction. It was also significantly less accurate in master model FL-S than in master model MD-M in the occluso-gingival direction. In the facio-lingual (Z) direction, DVF was significantly less accurate for master model MD-S than for FL-M and PVS-P was significantly less accurate for master model FL-M than for MD-S.

**Comparisons of Different Groups of Teeth on Bracket Transfer Accuracy per IDB Tray and Master Model Type – Intergroup Differences (Table 7)**

For all significant differences in bracket transfer accuracy between anterior and posterior teeth, posterior teeth were always found to be less accurate with the exception of PVS-P for master model FL-S in the occluso-gingival (Y) direction. In the facio-lingual (Z) direction,

posterior teeth were significantly less accurate than anterior teeth for D-PVS in master model FL-S, and for DVF and PVS-P in master model MD-S. Posterior teeth were also significantly less accurate than anterior teeth in the occluso-gingival direction (Y) for DVF in master model FL-M.

When comparing teeth on the right side versus the left side of the arch, D-PVS showed significantly lower bracket transfer accuracy on the right side in the mesio-distal (X) direction for master model FL-S, while showing significantly lower bracket transfer accuracy on the left side in the facio-lingual direction for master model MD-M.

## DISCUSSION

Most orthodontists aim to finish treatment in straight wire appliance with minimal wire bending. Pre-adjusted fixed appliance is designed to correct tooth positions in all three planes of space during treatment with placement of straight archwires.[12] If the bracket is placed correctly and the in-out compensations, tip, and torque built into the appliance are suited to patient's dentition, then only minimal wire bending is required.[13] IDB was evolved to achieve accurate bracket placement and eliminate the difficulty to bond brackets ideally due to poor visibility in DB.[1] Nowadays, there are numerous IDB tray methods published in the literature.[9-11,14-18] However, this brings the question whether different materials are similar in their bracket transferring accuracy. Two studies reported there were differences in accuracy found in different IDB tray materials tested on models with straight dentition.[3,4] This study found that facio-lingual displacement and/or tooth rotations had further effect on the bracket transferring accuracy of 3 IDB tray techniques and it varied depending on the properties of the materials and the severity and type of misalignment.

Armstrong et al. reported that a difference of at least 0.25 mm in upper and lower incisors and at least 0.5 mm for all other teeth, would be considered clinically significant.[19] Following Castilla et al.[3], the clinical significance of this study was set at 0.13 mm for all teeth. Out of all statistically significant differences shown between patient and working models, there was at least 1 tooth with a clinically significant difference found in each method, except for DVF which did not show any in facio-lingual displacement models and PVS-P that did not show any clinically significant difference in MD-S (Table 4). However, PVS-P had the highest number of clinically significant differences in FL-S, FL-M and MD-M. D-PVS had the least number of clinically

significant differences in MD-M. Master model MD-M had the most teeth with clinically significant differences (equal number in DVF and PVS-P).

The difference in bracket position between working and patient models in FL-M showed larger range in all 3 measured directions (X, Y, and Z) when compared to master model FL-S (Figure 10). The only exception was for the DVF method where master model FL-M that showed tighter range in facio-lingual (Z) direction than master model FL-S, although this difference was not statistically significant. Large range indicates higher data distribution and less precision of the data. Because the wide range could yield higher mean values, it could potentially affect all the accuracy comparisons made with master model FL-M (Table 6). The bracket transfer for the D-PVS and DVF methods was unexpectedly less accurate in master model FL-M when compared to master model FL-S in mesio-distal direction. Additionally, when comparing FL-M to MD-S, D-PVS and DVF showed significantly smaller bracket transfer accuracy in the mesio-distal direction and PVS-P showed significantly smaller bracket transfer accuracy in the occluso-gingival direction. One would anticipate the opposite result, that both severe master models (FL-S and MD-S) would have shown relatively lower bracket transfer accuracies. During the study, it was noted that once seated, the IDB trays for master model FL-M did not appear to lock in as well as the trays made for master model FL-S, which had more severe undercuts. This could also explain why most of the significant differences in accuracy were found in the mesio-distal direction.

The unforeseen benefit of severe undercuts was also evidenced in Table 4. In general, the master models of moderate severity showed higher differences in bracket placement before and after IDB transfer. Combining all the statistically significant differences found in each tooth, PVS-P was shown to be the least accurate method in master models FL-M, FL-S and MD-M because it showed the most differences (22) while D-PVS and DVF showed 15 statistically

significant differences. However, PVS-P did not show any statistically significant difference in MD-S. PVS-P had the highest total mean differences of 2.12 mm in FL-M, 0.46 mm in FL-S and 0.98 mm in MD-M (Table 4). Severe amount of undercuts in FL-S mechanically locked the tray, which increased PVS-P's bracket transfer accuracy. On the contrary, less amount of undercuts in the FL-M did not help the tray's adaptability and instead, reduced its bracket transfer accuracy. Furthermore, the increase in amount of rotations in MD-S compared to MD-M could have helped the tray's adaptation to the brackets and teeth.

DVF was shown to be more significantly affected by the rotation master models and it was the least accurate method in MD-S with a total mean difference of 0.83 mm (Table 4). However, DVF was the most accurate method among the facio-lingually displaced models showing the lowest statistically significant differences in FL-M and FL-S (0.1 mm and 0.08 mm, respectively) compared to the silicone-based methods. D-PVS was significantly affected by both facio-lingual displacement and tooth rotation but it was the most accurate method in MD-M with the lowest total mean difference of 0.58 mm (Table 4).

The bracket transfer accuracy of DVF for master model MD-S was lower compared to master model FL-M in the facio-lingual direction (Table 6). Furthermore, it was less accurate for FL-M than for both FL-S and MD-S in the mesio-distal direction by mean differences of 0.12 and 0.14 mm, respectively. Ryokawa et al. reported that ethyl vinyl acetate (Bioplast®, Great Lakes Orthodontics, Tonawanda, NY) undergoes a decrease in thickness and elastic modulus (decreased rigidity) following thermoforming.[20] The misaligned teeth could have amplified this change in the material's mechanical property as it had to overly stretch in the direction of the malocclusion to fully cover the teeth. During the cooling process following thermoforming, the tray material could

have pulled the brackets more in mesio-distal direction. Similarly, if Bioplast® could not cover the most rotated part of teeth, this could introduce room for errors in the facio-lingual direction.

PVS-P's bracket transfer accuracy for both facio-lingually displaced models (FL-S and FL-M) was significantly lower than for moderately rotated model in the occluso-gingival direction with mean differences ranging from 0.13 to 0.17 mm (Table 6). Very High Viscosity EXA'flex® PVS Putty, or PVS-P, has 78% amorphous silica[21], which makes EXA'flex® very stiff. This stiffness might have caused it not to be as forgiving, thus inhibiting the tray from fully seating. This could account for its decreased accuracy in the vertical (occluso-gingival) direction.

Although DVF method was significantly less accurate in the mesio-distal direction when compared to both silicone-based methods in master models FL-M and MD-M (Table 5), the method may not be less accurate than the silicone-based methods. DVF had the least number of statistically significant values and lowest total mean differences in master models FL-S and FL-M (Table 4). DVF showed to have relatively high bracket transfer accuracy in the presence of facio-lingual displacement. This finding was different from Castilla et al.[3] and Dorfer et al.[4] that reported vacuum form tray had lower bracket transfer accuracy. The undercuts in the models might have helped the tray's adaptability in the facio-lingual displacements, therefore, the data showed higher accuracy. Additionally, this result could have been affected by lower sample size of posterior teeth due to high number of debonds.

PVS-P was significantly less accurate in facio-lingual direction in the master model FL-S when compared to D-PVS group, even though the mean difference was small 0.05 mm. Chee and Donovan reported that viscosity is one factor that affects the accuracy of polyvinyl siloxane impression material.[22,23] The lower the viscosity of the impression material, the better it captures

fine detail.[22,23] Viscosity increases as the content of filler increases. Emiluma™ PVS material, the inner layer of D-PVS, does not contain inorganic filler[24], which makes it less stiff than the PVS-P. Putty material can be up to 3 times less accurate as any light body PVS impression material in recording fine details.[25] The fluidity of Emiluma™ might have allowed it to adapt closer against the brackets and details of tooth anatomy. Thus, this increased its adaptability and bracket transferring accuracy. Furthermore, PVS-P was also less accurate in facio-lingual direction when compared to DVF method in master model FL-M (Table 5).

Castilla et al. reported low occluso-gingival accuracy on anterior teeth for vacuum-form method that might be due to decreased tray thickness over longer anterior crowns.[3] This study found that in the DVF method, posterior teeth were significantly less accurate than anterior teeth in occluso-gingival direction in master model FL-M by a mean difference of 0.15 mm and facio-lingual direction in master model MD-S by 0.06 mm (Table 7). Because the anterior region had more crowding, it might have aided the adaptability of the tray in this area. However, this could have lifted the tray occlusally at the distal ends, causing it not to seat well over the posterior teeth. Hence, errors in the vertical direction occurred. This could account for the high number of debonded brackets at the terminal molars (5 brackets out of 7 debonded brackets in the DVF group). By contrast, bracket transfer accuracy of anterior teeth (where most of the crowding was located) in master model FL-S was significantly lower than that for posterior teeth for PVS-P in the occluso-gingival direction with a mean difference of 0.23 mm (Table 7). This again could be the result of facio-lingual displacement affecting proper seating of the relatively stiff PVS-P tray causing significant differences in the occluso-gingival direction. For D-PVS method, posterior teeth were less accurate than anterior teeth by 0.04 mm in master model FL-S (Table 7). The undercuts present in the crowded region showed to aid the tray's adaptability.

Castilla et al. reported that the silicone IDB trays had higher bracket transfer accuracy than the nonsilicone trays.[3] Moreover, PVS-P and D-PVS had comparable accuracy.[3] In this study, PVS-P had lower bracket transfer accuracy compared to D-PVS method in all master models except MD-S (Table 4). PVS-P also showed significant differences in the most displaced region in FL-S (Table 7). The stiff putty material could have hindered the full adaptation to the bracket and around the most displaced parts of the dentition. D-PVS was the most accurate method in MD-M and MD-S (Table 4). DVF was significantly affected by severe tooth rotations in MD-S compared to silicone-based methods (Table 4).

In choosing which tray technique to adopt, cost undoubtedly plays a role in the decision making process. The author calculated an estimated cost per arch to a practicing orthodontist for each technique. D-PVS was the most expensive at a price of $31.20 per arch. By comparison, DVF cost $3.75 per arch and PVS-P was the least expensive with a price $3.00 per arch (Table 1).

This study was conducted in laboratory setting which could be considered as its limitation. The ability to fully visualize the dental arches without any isolation issues does not reflect the difficulty that clinicians often encounter in fully seating the trays. Furthermore, all the malocclusions were custom fabricated. The results may be different with natural malocclusions. Future clinical studies are necessary to confirm the findings of this study. Lastly, the validity of the idea that the increased number of undercuts created higher tray adaptability in master model FL-S (10 mm arch length discrepancy) compared to master model FL-M (7 mm arch length discrepancy) should be examined further as this result was not expected.

## CONCLUSION

- Statistically significant differences were found between working and patient models for all IDB tray-master model combination. However, only about half of them were clinically significant.
- Undercuts created by misaligned teeth may help the IDB tray's adaptability
- PVS-P was the least accurate method in FL-S, FL-M and MD-M although it showed the highest bracket transfer accuracy in MD-S.
- PVS-P stiffness may affect the accuracy in the occluso-gingival direction
- DVF was significantly affected by severe tooth rotations in MD-S compared to silicone-based methods although it showed to have relatively high accuracy in the presence of facio-lingual displacement.
- D-PVS was the most accurate method in rotation models.

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**Table 1**: Indirect Bonding Tray Materials Studied

| | Product description (Product name) | | Manufacturer | Estimated cost per arch |
|---|---|---|---|---|
| | Inner Layer | Outer Layer | | |
| **D-PVS (Double PVS)** | Transparent polyvinyl siloxane (Emiluma™ Transparent Silicone for IDB) | Transparent medium body polyvinyl siloxane (LumaLoc™ Vinyl Polysiloxane) | Opal Orthodontics, South Jordan, UT | $31.20 |
| **PVS-P (PVS Putty)** | Vinyl Polysiloxane impression material (Very High Viscosity EXA'flex™ Putty-Type O) | N/A | GC America, Alsip, IL | $3.00 |
| **DVF (Double Vacuum Form)** | Transparent 1.5 mm ethyl vinyl acetate (Bioplast®) | Transparent 0.75mm polyethylene terphthalate glycol (Biocryl®) | Great Lakes Orthodontics, Tonawanda, NY | $3.75 |

**Table 2**: Description of Master Models

| | Type of displacements | Tooth size arch length discrepancy (mm) | Arch length discrepancy (mm) |
|---|---|---|---|
| **Model FL-M** | Facio-lingual | 12.73 | 7 |
| **Model FL-S** | Facio-lingual | 18.12 | 10 |
| **Model MD-M** | Mesio-distal or rotation | 11.01 | 7 |
| **Model MD-S** | Mesio-distal or rotation | 13.06 | 11 |

**Table 3:** Multivariate Linear Regression

| MULTIVARIATE LINEAR REGRESSION | | | | | | |
|---|---|---|---|---|---|---|
| DELTA | | NPARM | DF | SUM OF SQUARE | F RATIO | P VALUE* |
| X | MASTER MODEL | 3 | 3 | 0.33281555 | 11.2749 | <.0001* |
| | TRAY MATERIAL | 2 | 2 | 0.15293332 | 7.7714 | 0.0005* |
| | TOOTH | 11 | 11 | 0.10011116 | 0.9250 | 0.5161 |
| | MATERIAL*MODEL | 6 | 6 | 0.22099904 | 3.7434 | 0.0012* |
| Y | MASTER MODEL | 3 | 3 | 0.69337182 | 5.7812 | 0.0007* |
| | TRAY MATERIAL | 2 | 2 | 0.00490888 | 0.0614 | 0.9405 |
| | TOOTH | 11 | 11 | 0.30326477 | 0.6896 | 0.7487 |
| | MATERIAL*MODEL | 6 | 6 | 0.33842077 | 1.4108 | 0.2090 |
| Z | MASTER MODEL | 3 | 3 | 0.00594753 | 0.3138 | 0.8154 |
| | TRAY MATERIAL | 2 | 2 | 0.02087805 | 1.6522 | 0.1929 |
| | TOOTH | 11 | 11 | 0.08166497 | 1.1750 | 0.3023 |
| | MATERIAL*MODEL | 6 | 6 | 0.15431599 | 4.0707 | 0.0006* |

* $P<.05$ indicates significance

**Table 4**: Intra-group comparison

| Master Model | Material | Tooth | Point, Direction | Obs | Variables^ | Mean (mm) | p value* | Delta Mean(mm) | Misplacement+ |
|---|---|---|---|---|---|---|---|---|---|
| FL-M | DPVS | UL5 | AX | 3 | W Mean | 8.57 | | | |
| | | | | 3 | P Mean | 8.42 | 0.048 | 0.15 | D |
| | DPVS | UL5 | BX | 3 | W Mean | 9.81 | | | |
| | | | | 3 | P Mean | 9.63 | 0.023 | 0.18 | D |
| | DPVS | UR3 | D | 3 | W Mean | 11.96 | | | |
| | | | | 3 | P Mean | 11.87 | 0.0219 | 0.09 | L |
| | DVF | UL4 | C | 3 | W Mean | 9.62 | | | |
| | | | | 3 | P Mean | 9.57 | 0.014 | 0.05 | L |
| | DVF | UR1 | C | 3 | W Mean | 13.60 | | | |
| | | | | 3 | P Mean | 13.65 | 0.018 | 0.05 | F |
| | PVSP | UL3 | AX | 3 | W Mean | 6.17 | | | |
| | | | | 3 | P Mean | 6.04 | 0.027 | 0.13 | D |
| | PVSP | UL3 | BX | 3 | W Mean | 7.48 | | | |
| | | | | 3 | P Mean | 7.36 | 0.028 | 0.12 | D |
| | PVSP | UL5 | AX | 3 | W Mean | 8.98 | | | |
| | | | | 3 | P Mean | 8.93 | 0.015 | 0.05 | D |
| | PVSP | UL6 | AY | 3 | W Mean | 10.11 | | | |
| | | | | 3 | P Mean | 10.71 | 0.0006 | 0.61 | O |
| | PVSP | UL6 | BY | 3 | W Mean | 10.30 | | | |
| | | | | 3 | P Mean | 10.91 | 0.0002 | 0.61 | O |
| | PVSP | UR2 | C | 3 | W Mean | 13.56 | | | |
| | | | | 3 | P Mean | 13.39 | 0.031 | 0.17 | L |
| | PVSP | UR2 | D | 3 | W Mean | 13.43 | | | |
| | | | | 3 | P Mean | 13.25 | 0.0273 | 0.19 | L |
| | PVSP | UR3 | C | 3 | W Mean | 11.77 | | | |
| | | | | 3 | P Mean | 11.66 | 0.020 | 0.12 | L |
| | PVSP | UR4 | C | 3 | W Mean | 9.47 | | | |
| | | | | 3 | P Mean | 9.39 | 0.012 | 0.08 | L |
| | PVSP | UR4 | D | 3 | W Mean | 9.18 | | | |
| | | | | 3 | P Mean | 9.14 | 0.0022 | 0.04 | L |

| Master Model | Material | Tooth | Point, Direction | Obs | Variables^ | Mean (mm) | p value* | Delta Mean(mm) | Misplacement+ |
|---|---|---|---|---|---|---|---|---|---|
| FL-S | DPVS | UL3 | D | 3 | W Mean | 11.78 | | | |
| | | | | 3 | P Mean | 11.73 | 0.0401 | 0.05 | L |
| | DPVS | UR6 | C | 3 | W Mean | 7.06 | | | |
| | | | | 3 | P Mean | 6.92 | 0.003 | 0.14 | L |
| | DVF | UL1 | BX | 3 | W Mean | 9.40 | | | |
| | | | | 3 | P Mean | 9.48 | 0.034 | 0.08 | M |
| | PVSP | UL2 | BX | 3 | W Mean | 9.49 | | | |
| | | | | 3 | P Mean | 9.39 | 0.047 | 0.10 | D |
| | PVSP | UL4 | C | 3 | W Mean | 10.25 | | | |
| | | | | 3 | P Mean | 10.16 | 0.018 | 0.09 | L |
| | PVSP | UR4 | AX | 3 | W Mean | 8.77 | | | |
| | | | | 3 | P Mean | 8.92 | 0.029 | 0.15 | M |
| | PVSP | UR4 | BX | 3 | W Mean | 10.05 | | | |
| | | | | 3 | P Mean | 10.17 | 0.020 | 0.12 | M |

| Master Model | Material | Tooth | Point, Direction | Obs | Variables^ | Mean (mm) | p value* | Delta Mean(mm) | Misplacement+ |
|---|---|---|---|---|---|---|---|---|---|
| MD-M | DPVS | UL1 | BX | 3 | W Mean | 4.27 | | | |
| | | | | 3 | P Mean | 4.38 | 0.018 | 0.11 | M |
| | DPVS | UL1 | C | 3 | W Mean | 12.99 | | | |
| | | | | 3 | P Mean | 12.91 | 0.026 | 0.08 | L |
| | DPVS | UR1 | AY | 3 | W Mean | 10.85 | | | |
| | | | | 3 | P Mean | 10.73 | 0.0007 | 0.12 | G |
| | DPVS | UR1 | BY | 3 | W Mean | 10.86 | | | |
| | | | | 3 | P Mean | 10.73 | 0.0027 | 0.13 | G |
| | DPVS | UR5 | C | 3 | W Mean | 9.58 | | | |
| | | | | 3 | P Mean | 9.46 | 0.010 | 0.11 | L |
| | DPVS | UR6 | AX | 3 | W Mean | 8.87 | | | |
| | | | | 3 | P Mean | 8.84 | 0.014 | 0.03 | D |
| | DVF | UL3 | D | 3 | W Mean | 12.29 | | | |
| | | | | 3 | P Mean | 12.15 | 0.008 | 0.14 | L |
| | DVF | UR5 | BY | 3 | W Mean | 9.61 | | | |
| | | | | 3 | P Mean | 9.54 | 0.0018 | 0.08 | G |
| | DVF | UR5 | C | 3 | W Mean | 9.58 | | | |
| | | | | 3 | P Mean | 9.42 | 0.027 | 0.17 | L |
| | DVF | UR5 | D | 3 | W Mean | 9.70 | | | |
| | | | | 3 | P Mean | 9.55 | 0.0003 | 0.15 | L |
| | DVF | UR6 | C | 3 | W Mean | 7.45 | | | |
| | | | | 3 | P Mean | 7.32 | 0.008 | 0.13 | L |
| | DVF | UR6 | D | 3 | W Mean | 7.89 | | | |
| | | | | 3 | P Mean | 7.79 | 0.0192 | 0.10 | L |
| | PVSP | UL3 | AY | 3 | W Mean | 11.45 | | | |
| | | | | 3 | P Mean | 11.32 | 0.0366 | 0.13 | G |
| | PVSP | UL3 | BY | 3 | W Mean | 11.32 | | | |
| | | | | 3 | P Mean | 11.18 | 0.0281 | 0.15 | G |
| | PVSP | UL5 | BX | 3 | W Mean | 1.79 | | | |
| | | | | 3 | P Mean | 1.90 | 0.043 | 0.11 | M |
| | PVSP | UL5 | D | 3 | W Mean | 9.85 | | | |
| | | | | 3 | P Mean | 9.80 | 0.0034 | 0.05 | L |
| | PVSP | UL6 | AX | 3 | W Mean | 1.10 | | | |
| | | | | 3 | P Mean | 1.17 | 0.038 | 0.07 | M |
| | PVSP | UL6 | D | 3 | W Mean | 7.93 | | | |
| | | | | 3 | P Mean | 7.80 | 0.0442 | 0.13 | L |
| | PVSP | UR2 | AY | 3 | W Mean | 11.78 | | | |
| | | | | 3 | P Mean | 11.95 | 0.0475 | 0.17 | O |
| | PVSP | UR2 | BY | 3 | W Mean | 11.75 | | | |
| | | | | 3 | P Mean | 11.91 | 0.0393 | 0.17 | O |

| Master Model | Material | Tooth | Point, Direction | Obs | Variables^ | Mean (mm) | p value* | Delta Mean(mm) | Misplacement+ |
|---|---|---|---|---|---|---|---|---|---|
| MD-S | DPVS | UR2 | D | 3 | W Mean | 13.62 | | | |
| | | | | 3 | P Mean | 13.53 | 0.0421 | 0.09 | L |
| | DPVS | UR3 | AY | 3 | W Mean | 13.03 | | | |
| | | | | 3 | P Mean | 12.88 | 0.0226 | 0.15 | G |
| | DPVS | UR3 | BY | 3 | W Mean | 12.96 | | | |
| | | | | 3 | P Mean | 12.83 | 0.028 | 0.13 | G |
| | DPVS | UR3 | C | 3 | W Mean | 11.96 | | | |
| | | | | 3 | P Mean | 11.75 | 0.019 | 0.21 | L |
| | DVF | UL1 | AX | 3 | W Mean | 5.08 | | | |
| | | | | 3 | P Mean | 5.23 | 0.047 | 0.15 | M |
| | DVF | UL2 | D | 3 | W Mean | 13.57 | | | |
| | | | | 3 | P Mean | 13.47 | 0.0047 | 0.10 | L |
| | DVF | UL5 | AX | 3 | W Mean | 5.59 | | | |
| | | | | 3 | P Mean | 5.38 | 0.030 | 0.21 | D |
| | DVF | UL5 | BX | 3 | W Mean | 6.83 | | | |
| | | | | 3 | P Mean | 6.62 | 0.044 | 0.21 | D |
| | DVF | UR5 | C | 3 | W Mean | 9.73 | | | |
| | | | | 3 | P Mean | 9.82 | 0.002 | 0.09 | F |
| | DVF | UR5 | D | 3 | W Mean | 9.78 | | | |
| | | | | 3 | P Mean | 9.85 | 0.0308 | 0.07 | F |

^W-Working, P-Patient.

* Only statistically significant values shown

+ M-Mesial. D-Distal. O-Occlusal. G-Gingival. F-Facial. L-Lingual.

**Table 5**: Tray method comparison for each master model type in X, Y, and Z directions (mm)

| MASTER MODEL FL-M | | | | | | | |
|---|---|---|---|---|---|---|---|
| DELTA | TRAY MATERIAL | vs. TRAY MATERIAL | DIFFERENCE (mm) | STANDARD ERROR (mm) | LOWER CL (mm) | UPPER CL (mm) | P VALUE* |
| X | DVF | PVS-P | 0.10 | 0.03 | 0.02 | 0.18 | 0.0119* |
| | DVF | D-PVS | 0.09 | 0.03 | 0.01 | 0.18 | 0.0237* |
| | D-PVS | PVS-P | 0.01 | 0.03 | -0.07 | 0.09 | 0.9653 |
| Y | PVS-P | DVF | 0.05 | 0.05 | -0.07 | 0.18 | 0.5780 |
| | D-PVS | DVF | 0.04 | 0.05 | -0.08 | 0.17 | 0.7021 |
| | PVS-P | D-PVS | 0.01 | 0.05 | -0.11 | 0.13 | 0.9780 |
| Z | PVS-P | DVF | 0.08 | 0.02 | 0.02 | 0.13 | 0.0027* |
| | D-PVS | DVF | 0.04 | 0.02 | -0.01 | 0.09 | 0.1789 |
| | PVS-P | D-PVS | 0.04 | 0.02 | -0.02 | 0.09 | 0.2336 |

| MASTER MODEL FL-S | | | | | | | |
|---|---|---|---|---|---|---|---|
| DELTA | TRAY MATERIAL | vs. TRAY MATERIAL | DIFFERENCE (mm) | STANDARD ERROR (mm) | LOWER CL (mm) | UPPER CL (mm) | P VALUE* |
| X | PVS-P | D-PVS | 0.05 | 0.02 | 0.00 | 0.10 | 0.0746 |
| | PVS-P | DVF | 0.05 | 0.02 | -0.01 | 0.10 | 0.1117 |
| | DVF | D-PVS | 0.00 | 0.02 | -0.05 | 0.06 | 0.9898 |
| Y | PVS-P | D-PVS | 0.08 | 0.05 | -0.05 | 0.21 | 0.3412 |
| | PVS-P | DVF | 0.05 | 0.06 | -0.09 | 0.18 | 0.6875 |
| | DVF | D-PVS | 0.03 | 0.06 | -0.10 | 0.16 | 0.8470 |
| Z | PVS-P | D-PVS | 0.05 | 0.02 | 0.00 | 0.09 | 0.0411* |
| | DVF | D-PVS | 0.02 | 0.02 | -0.02 | 0.07 | 0.4298 |
| | PVS-P | DVF | 0.02 | 0.02 | -0.02 | 0.07 | 0.4800 |

| MASTER MODEL MD-M | | | | | | | |
|---|---|---|---|---|---|---|---|
| DELTA | TRAY MATERIAL | vs. TRAY MATERIAL | DIFFERENCE (mm) | STANDARD ERROR (mm) | LOWER CL (mm) | UPPER CL (mm) | P VALUE* |
| X | DVF | PVS-P | 0.06 | 0.02 | 0.02 | 0.11 | 0.0016* |
| | DVF | D-PVS | 0.06 | 0.02 | 0.01 | 0.10 | 0.0067* |
| | D-PVS | PVS-P | 0.01 | 0.02 | -0.03 | 0.05 | 0.8968 |
| Y | DVF | PVS-P | 0.09 | 0.04 | -0.01 | 0.20 | 0.0955 |
| | D-PVS | PVS-P | 0.06 | 0.04 | -0.04 | 0.16 | 0.3697 |
| | DVF | D-PVS | 0.03 | 0.04 | -0.07 | 0.14 | 0.7322 |
| Z | DVF | D-PVS | 0.02 | 0.02 | -0.02 | 0.06 | 0.4398 |
| | DVF | PVS-P | 0.02 | 0.02 | -0.02 | 0.06 | 0.4408 |
| | PVS-P | D-PVS | 0.00 | 0.02 | -0.04 | 0.04 | 1.0000 |

| MASTER MODEL MD-S | | | | | | | |
|---|---|---|---|---|---|---|---|
| DELTA | TRAY MATERIAL | vs. TRAY MATERIAL | DIFFERENCE (mm) | STANDARD ERROR (mm) | LOWER CL (mm) | UPPER CL (mm) | P VALUE* |
| X | DVF | PVS-P | 0.03 | 0.01 | 0.00 | 0.06 | 0.0703 |
| | DVF | D-PVS | 0.02 | 0.01 | -0.01 | 0.05 | 0.3283 |
| | D-PVS | PVS-P | 0.01 | 0.01 | -0.02 | 0.04 | 0.7088 |
| Y | DVF | PVS-P | 0.03 | 0.04 | -0.05 | 0.12 | 0.6103 |
| | D-PVS | PVS-P | 0.03 | 0.04 | -0.05 | 0.11 | 0.6966 |
| | DVF | D-PVS | 0.00 | 0.04 | -0.08 | 0.09 | 0.9897 |
| Z | DVF | PVS-P | 0.04 | 0.02 | -0.01 | 0.08 | 0.1185 |
| | DVF | D-PVS | 0.02 | 0.02 | -0.02 | 0.06 | 0.4759 |
| | D-PVS | PVS-P | 0.01 | 0.02 | -0.03 | 0.06 | 0.6912 |

*$P < .05$ indicates significance

**Table 6**: Master model comparison for each IDB tray technique in X, Y, and Z directions (mm)

| D-PVS | | | | | | | |
|---|---|---|---|---|---|---|---|
| DELTA | MASTER MODEL | vs. MASTER MODEL | DIFFERENCE (mm) | STANDARD ERROR (mm) | LOWER CL (mm) | UPPER CL (mm) | P VALUE* |
| X | FL-M | FL-S | 0.05 | 0.01 | 0.01 | 0.09 | 0.0025* |
| | FL-M | MD-M | 0.05 | 0.01 | 0.01 | 0.08 | 0.0124* |
| | FL-M | MD-S | 0.05 | 0.02 | 0.01 | 0.08 | 0.016* |
| | MD-S | FL-S | 0.01 | 0.02 | -0.03 | 0.05 | 0.9461 |
| | MD-M | FL-S | 0.01 | 0.01 | -0.03 | 0.05 | 0.9612 |
| | MD-S | MD-M | 0.00 | 0.02 | -0.04 | 0.04 | 0.9999 |
| Y | FL-M | FL-S | 0.11 | 0.04 | -0.01 | 0.22 | 0.0811 |
| | FL-M | MD-S | 0.11 | 0.04 | -0.01 | 0.22 | 0.0885 |
| | FL-M | MD-M | 0.10 | 0.04 | -0.02 | 0.21 | 0.1416 |
| | MD-M | FL-S | 0.01 | 0.04 | -0.10 | 0.13 | 0.9945 |
| | MD-M | MD-S | 0.01 | 0.04 | -0.11 | 0.13 | 0.9958 |
| | MD-S | FL-S | 0.00 | 0.04 | -0.12 | 0.12 | 1.0000 |
| Z | FL-M | FL-S | 0.03 | 0.02 | -0.01 | 0.08 | 0.1388 |
| | MD-S | FL-S | 0.02 | 0.02 | -0.02 | 0.07 | 0.4686 |
| | MD-M | FL-S | 0.02 | 0.02 | -0.02 | 0.06 | 0.6347 |
| | FL-M | MD-M | 0.02 | 0.02 | -0.03 | 0.06 | 0.7645 |
| | FL-M | MD-S | 0.01 | 0.02 | -0.03 | 0.05 | 0.8990 |
| | MD-S | MD-M | 0.00 | 0.02 | -0.04 | 0.05 | 0.9929 |

| DVF | | | | | | | |
|---|---|---|---|---|---|---|---|
| DELTA | MASTER MODEL | vs. MASTER MODEL | DIFFERENCE (mm) | STANDARD ERROR (mm) | LOWER CL (mm) | UPPER CL (mm) | P VALUE* |
| X | FL-M | FL-S | 0.14 | 0.03 | 0.06 | 0.23 | 0.0001* |
| | FL-M | MD-S | 0.12 | 0.03 | 0.03 | 0.20 | 0.0019* |
| | FL-M | MD-M | 0.08 | 0.03 | 0.00 | 0.17 | 0.0504 |
| | MD-M | FL-S | 0.06 | 0.03 | -0.02 | 0.14 | 0.2595 |
| | MD-M | MD-S | 0.03 | 0.03 | -0.05 | 0.12 | 0.6926 |
| | MD-S | FL-S | 0.02 | 0.03 | -0.06 | 0.11 | 0.8722 |
| Y | FL-M | MD-S | 0.06 | 0.05 | -0.08 | 0.19 | 0.6679 |
| | MD-M | MD-S | 0.04 | 0.05 | -0.10 | 0.17 | 0.8767 |
| | FL-M | FL-S | 0.03 | 0.05 | -0.10 | 0.17 | 0.9159 |
| | FL-S | MD-S | 0.02 | 0.05 | -0.11 | 0.16 | 0.9646 |
| | FL-M | MD-M | 0.02 | 0.05 | -0.11 | 0.16 | 0.9795 |
| | MD-M | FL-S | 0.01 | 0.05 | -0.12 | 0.15 | 0.9935 |
| Z | MD-S | FL-M | 0.05 | 0.02 | 0.00 | 0.10 | 0.0403* |
| | MD-M | FL-M | 0.04 | 0.02 | 0.00 | 0.09 | 0.0868 |
| | FL-S | FL-M | 0.03 | 0.02 | -0.02 | 0.08 | 0.4183 |
| | MD-S | FL-S | 0.02 | 0.02 | -0.03 | 0.07 | 0.6802 |
| | MD-M | FL-S | 0.02 | 0.02 | -0.03 | 0.06 | 0.8499 |
| | MD-S | MD-M | 0.01 | 0.02 | -0.04 | 0.05 | 0.9895 |

| PVS-P | | | | | | | |
|---|---|---|---|---|---|---|---|
| DELTA | MASTER MODEL | vs. MASTER MODEL | DIFFERENCE (mm) | STANDARD ERROR (mm) | LOWER CL (mm) | UPPER CL (mm) | P VALUE* |
| X | FL-S | MD-S | 0.05 | 0.02 | 0.00 | 0.11 | 0.0639 |
| | FL-S | MD-M | 0.05 | 0.02 | 0.00 | 0.11 | 0.0793 |
| | FL-M | MD-S | 0.05 | 0.02 | -0.01 | 0.10 | 0.1166 |
| | FL-M | MD-M | 0.05 | 0.02 | -0.01 | 0.10 | 0.1413 |
| | FL-S | FL-M | 0.01 | 0.02 | -0.05 | 0.06 | 0.9939 |
| | MD-M | MD-S | 0.00 | 0.02 | -0.05 | 0.06 | 0.9997 |
| Y | FL-M | MD-M | 0.17 | 0.05 | 0.05 | 0.28 | 0.0019* |
| | FL-M | MD-S | 0.15 | 0.05 | 0.03 | 0.26 | 0.0087* |
| | FL-S | MD-M | 0.12 | 0.05 | 0.01 | 0.24 | 0.0333* |
| | FL-S | MD-S | 0.10 | 0.05 | -0.01 | 0.22 | 0.1027 |
| | FL-M | FL-S | 0.04 | 0.05 | -0.08 | 0.16 | 0.7982 |
| | MD-S | MD-M | 0.02 | 0.05 | -0.10 | 0.14 | 0.9688 |
| Z | FL-M | MD-S | 0.06 | 0.02 | 0.01 | 0.12 | 0.0207* |
| | FL-M | MD-M | 0.05 | 0.02 | 0.00 | 0.11 | 0.0742 |
| | FL-S | MD-S | 0.04 | 0.02 | -0.02 | 0.09 | 0.3295 |
| | FL-M | FL-S | 0.03 | 0.02 | -0.03 | 0.08 | 0.6096 |
| | FL-S | MD-M | 0.03 | 0.02 | -0.03 | 0.08 | 0.6202 |
| | MD-M | MD-S | 0.01 | 0.02 | -0.05 | 0.07 | 0.9625 |

* $P < .05$ indicates significance

**Table 7**: Teeth comparison (right vs. left, anterior vs. posterior) for 3 IDB tray methods (mm)

| MASTER MODEL FL-M | | | | | |
|---|---|---|---|---|---|
| TRAY MATERIAL | DIRECTION | DIFFERENCE (RIGHT - LEFT) (mm) | P VALUE | DIFFERENCE (POSTERIOR - ANTERIOR) (mm) | P VALUE* |
| D-PVS | Delta X | -0.03 | 0.3603 | 0.02 | 0.4166 |
| | Delta Y | 0.10 | 0.1961 | -0.08 | 0.3407 |
| | Delta Z | 0.00 | 0.8835 | -0.02 | 0.5695 |
| DVF | Delta X | 0.07 | 0.3564 | -0.03 | 0.7024 |
| | Delta Y | 0.01 | 0.9371 | 0.15 | 0.0348* |
| | Delta Z | 0.00 | 0.9508 | -0.02 | 0.3875 |
| PVS-P | Delta X | 0.05 | 0.0786 | -0.02 | 0.5881 |
| | Delta Y | -0.12 | 0.0954 | 0.11 | 0.1299 |
| | Delta Z | 0.01 | 0.8612 | -0.02 | 0.7114 |

| MASTER MODEL FL-S | | | | | |
|---|---|---|---|---|---|
| TRAY MATERIAL | DIRECTION | DIFFERENCE (RIGHT - LEFT) (mm) | P VALUE* | DIFFERENCE (POSTERIOR - ANTERIOR) (mm) | P VALUE* |
| D-PVS | Delta X | 0.04 | 0.0327* | 0.02 | 0.2385 |
| | Delta Y | 0.04 | 0.3447 | -0.03 | 0.5642 |
| | Delta Z | 0.03 | 0.1136 | 0.04 | 0.0336* |
| DVF | Delta X | -0.02 | 0.4108 | 0.01 | 0.6961 |
| | Delta Y | -0.11 | 0.2407 | 0.01 | 0.9550 |
| | Delta Z | -0.06 | 0.0650 | 0.00 | 0.9981 |
| PVS-P | Delta X | 0.09 | 0.0615 | 0.01 | 0.7780 |
| | Delta Y | 0.07 | 0.4942 | -0.23 | 0.0134* |
| | Delta Z | 0.01 | 0.8635 | -0.01 | 0.5964 |

| MASTER MODEL MD-M | | | | | |
|---|---|---|---|---|---|
| TRAY MATERIAL | DIRECTION | DIFFERENCE (RIGHT - LEFT) (mm) | P VALUE* | DIFFERENCE (POSTERIOR - ANTERIOR) (mm) | P VALUE |
| D-PVS | Delta X | -0.02 | 0.3605 | 0.00 | 0.8627 |
| | Delta Y | -0.01 | 0.9267 | -0.10 | 0.1202 |
| | Delta Z | -0.04 | 0.0319* | 0.02 | 0.3179 |
| DVF | Delta X | -0.04 | 0.2672 | 0.02 | 0.5425 |
| | Delta Y | -0.03 | 0.6969 | -0.13 | 0.1278 |
| | Delta Z | 0.01 | 0.7798 | -0.02 | 0.3135 |
| PVS-P | Delta X | -0.02 | 0.2178 | -0.01 | 0.7739 |
| | Delta Y | -0.01 | 0.8442 | -0.05 | 0.1023 |
| | Delta Z | 0.02 | 0.5446 | -0.01 | 0.6951 |

| MASTER MODEL MD-S | | | | | |
|---|---|---|---|---|---|
| TRAY MATERIAL | DIRECTION | DIFFERENCE (RIGHT - LEFT) (mm) | P VALUE | DIFFERENCE (POSTERIOR - ANTERIOR) (mm) | P VALUE* |
| D-PVS | Delta X | -0.02 | 0.3841 | 0.02 | 0.2263 |
| | Delta Y | -0.02 | 0.7205 | 0.03 | 0.5829 |
| | Delta Z | 0.05 | 0.0591 | 0.00 | 0.8564 |
| DVF | Delta X | -0.03 | 0.2563 | 0.04 | 0.0841 |
| | Delta Y | 0.06 | 0.2453 | 0.06 | 0.2184 |
| | Delta Z | 0.01 | 0.7016 | 0.06 | 0.0352* |
| PVS-P | Delta X | -0.01 | 0.4317 | 0.00 | 0.8268 |
| | Delta Y | 0.00 | 0.9163 | -0.03 | 0.4766 |
| | Delta Z | 0.03 | 0.2094 | 0.05 | 0.0289* |

* $P < .05$ indicates significance

Anterior teeth were incisors and canines. Posterior teeth were premolars and molars.

## FIGURE LEGENDS

Figure 1. Model FL-M, moderate facio-lingual displacement (7 mm)

Figure 2. Model FL-S, severe facio-lingual displacement (10 mm)

Figure 3. Model MD-M, moderate mesio-distal displacement (7 mm)

Figure 4. Model MD-S, severe mesio-distal displacement (11 mm)

Figure 5. The study design

Figure 6. IDB tray methods (A) D-PVS (B) PVS-P (C) DVF

Figure 7. The jig with the camera and model in a fixed position

Figure 8. Measuring points A, B, C, and D on the bracket and molar tube

Figure 9. ECCO-100795 digital caliper (Courtesy of Castilla et al.)

Figure 10. Data distribution and mean values stratified by model types and IDB materials

**Figure 1.**

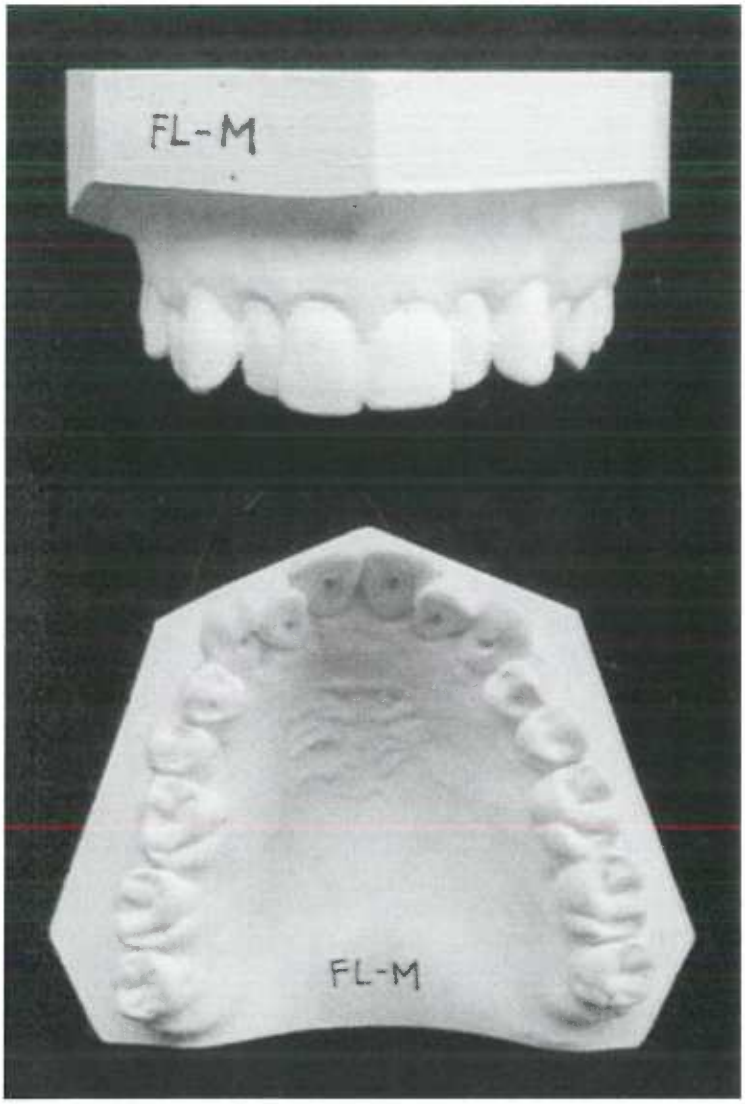


**Figure 2.**

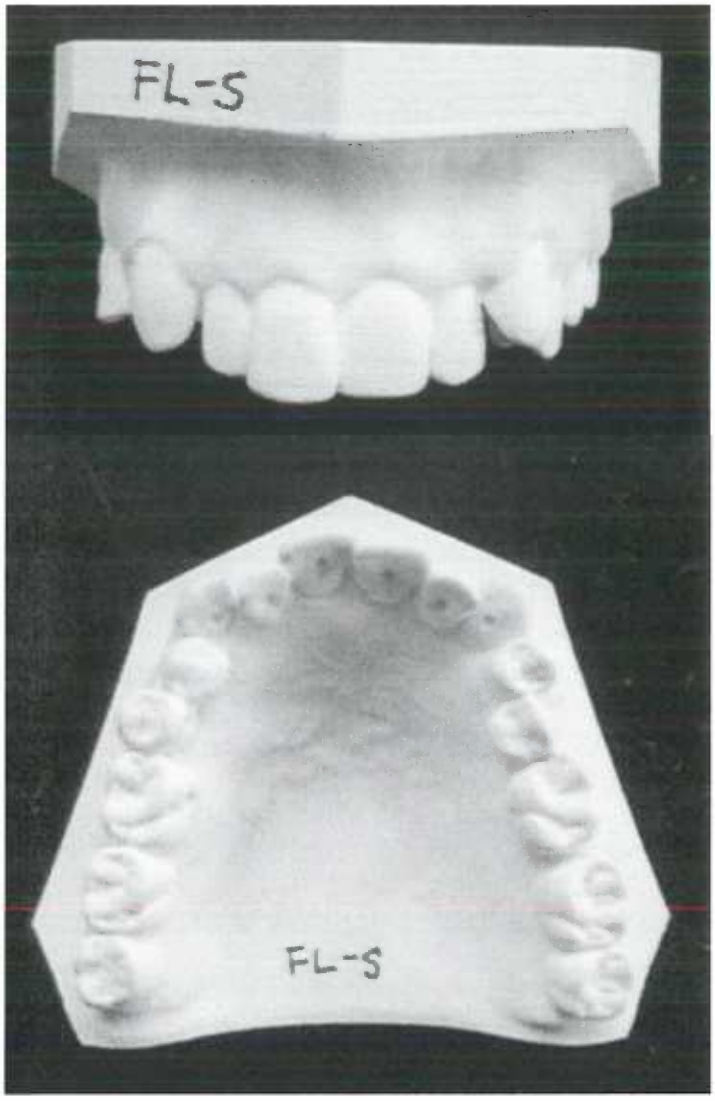


**Figure 3.**

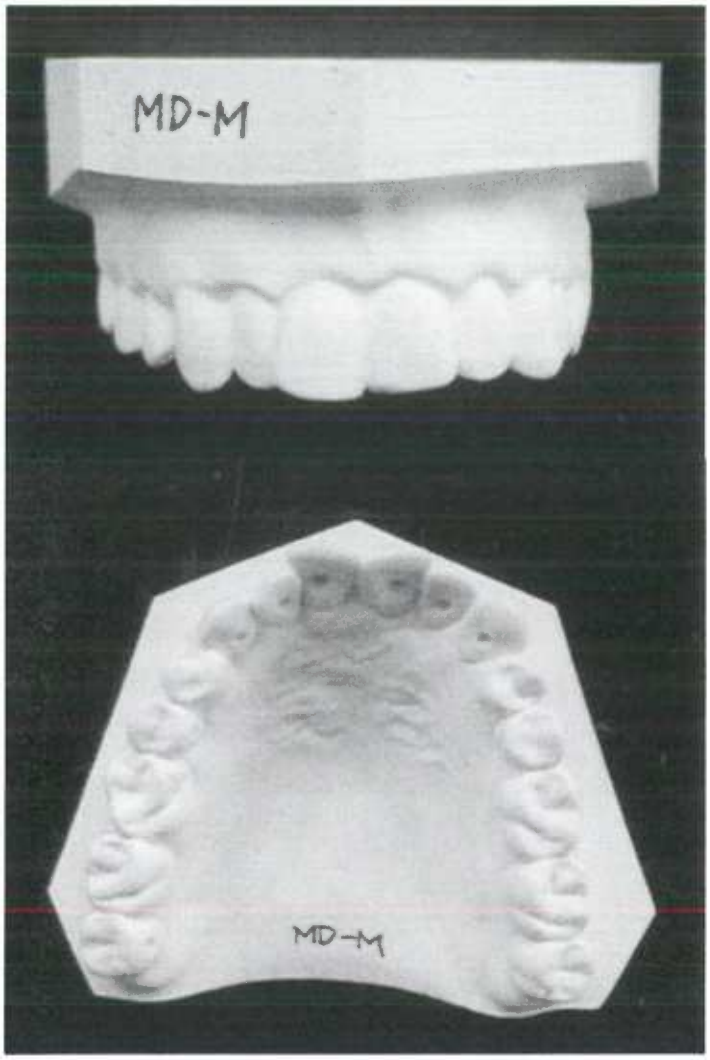


**Figure 4.**

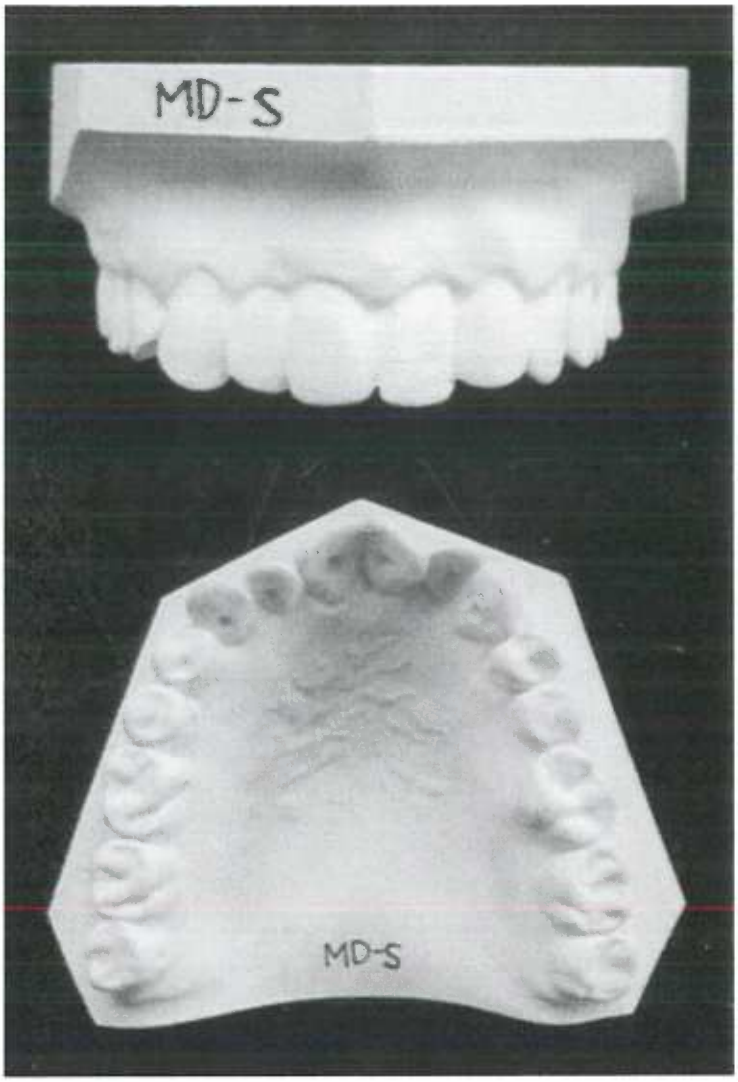


**Figure 5.**

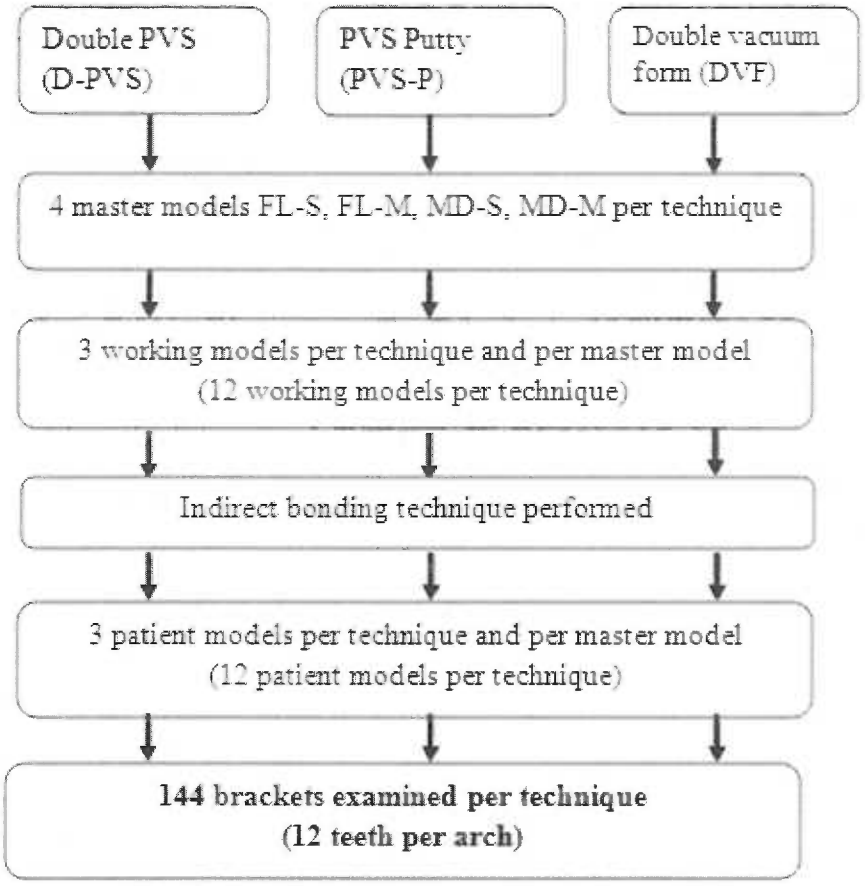
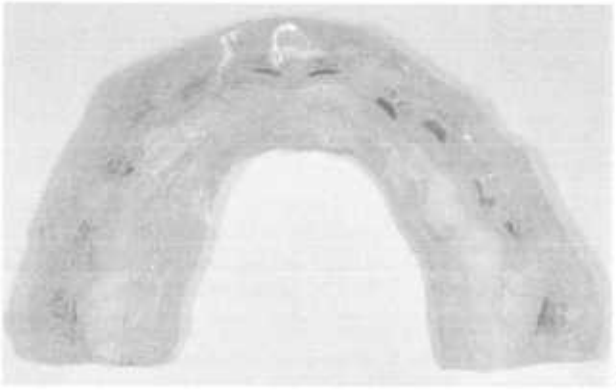

Double PVS (D-PVS)
PVS Putty (PVS-P)
Double vacuum form (DVF)
4 master models FL-S, FL-M, MD-S, MD-M per technique
3 working models per technique and per master model (12 working models per technique)
Indirect bonding technique performed
3 patient models per technique and per master model (12 patient models per technique)
144 brackets examined per technique (12 teeth per arch)

**Figure 6.**



(A)

(B)

(C)

**Figure 7.**

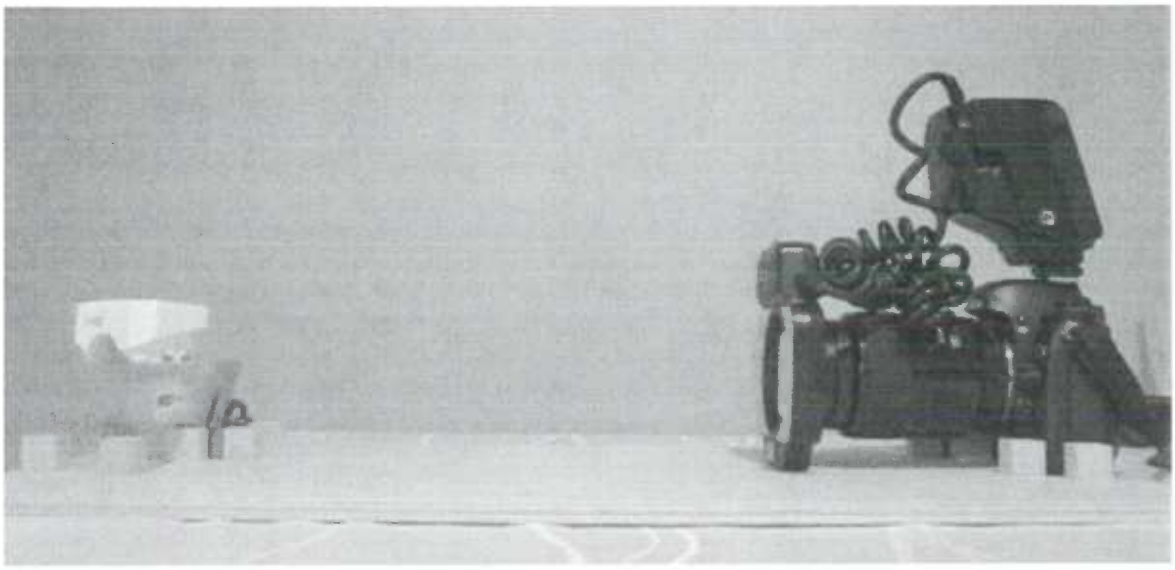


**Figure 8.**

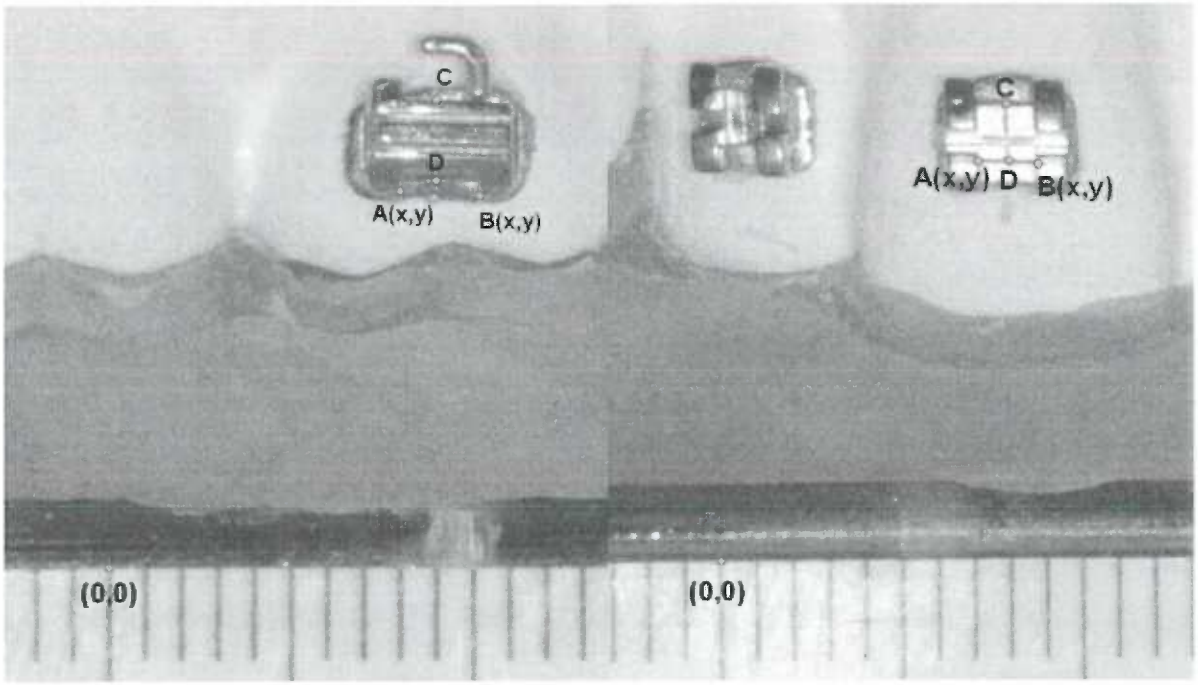
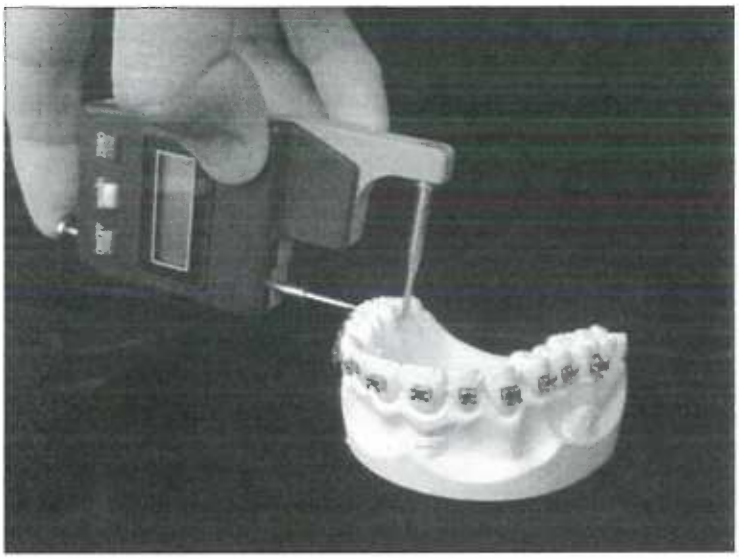
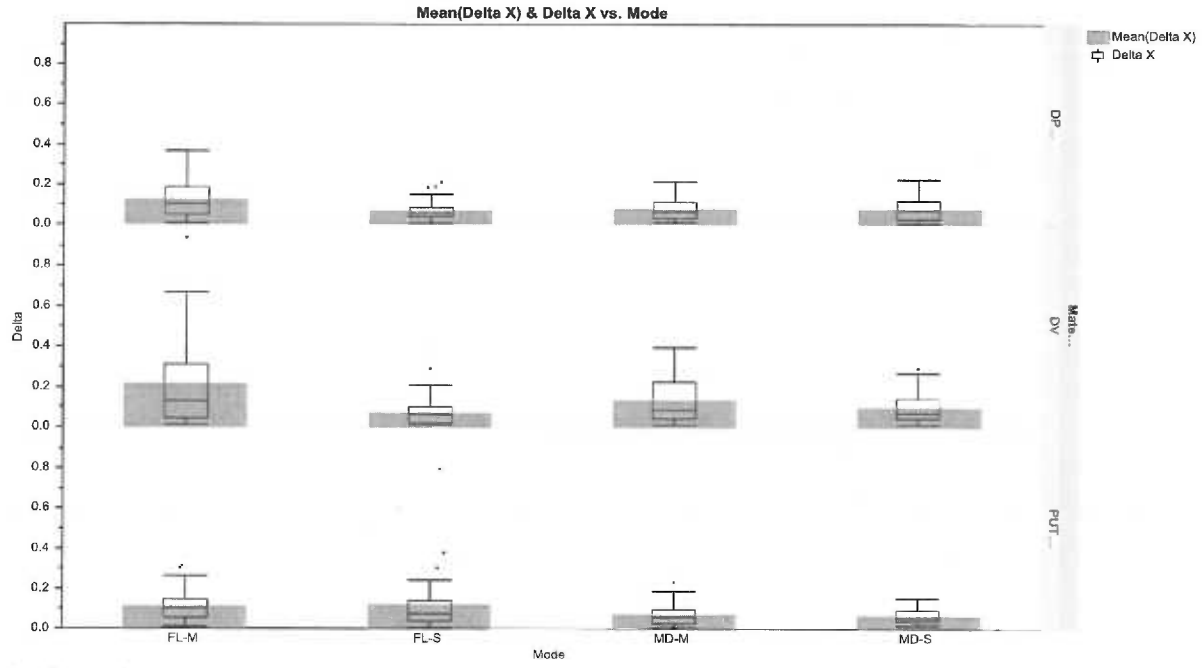


**Figure 9.**

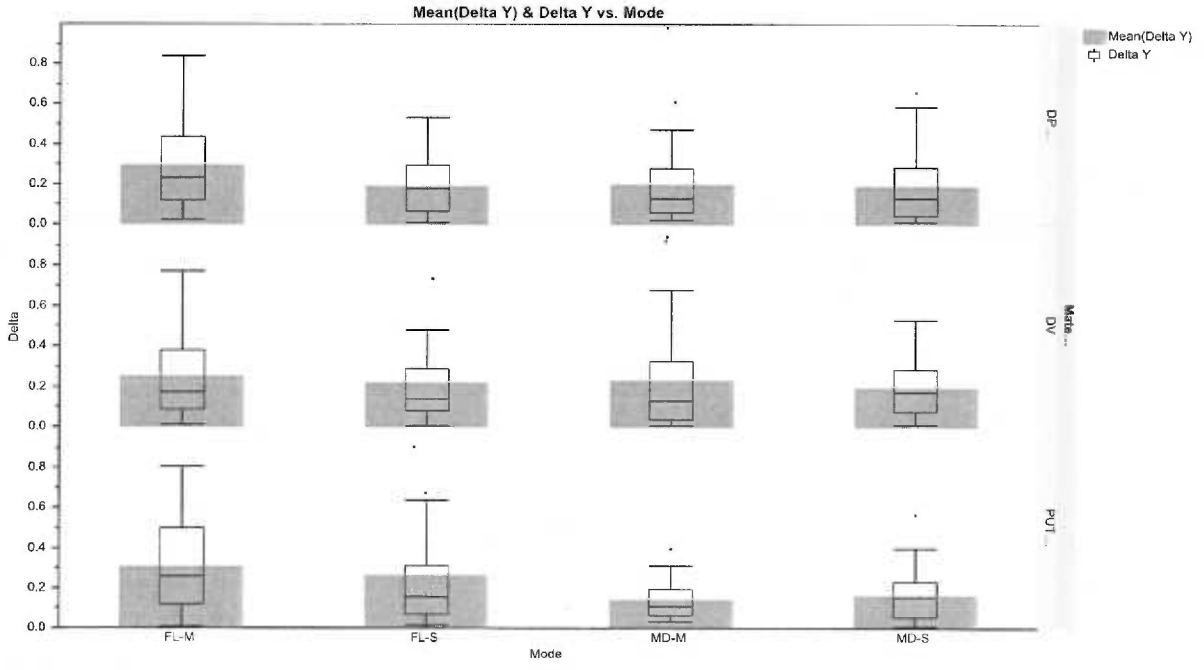


(Courtesy of Castilla et al.)

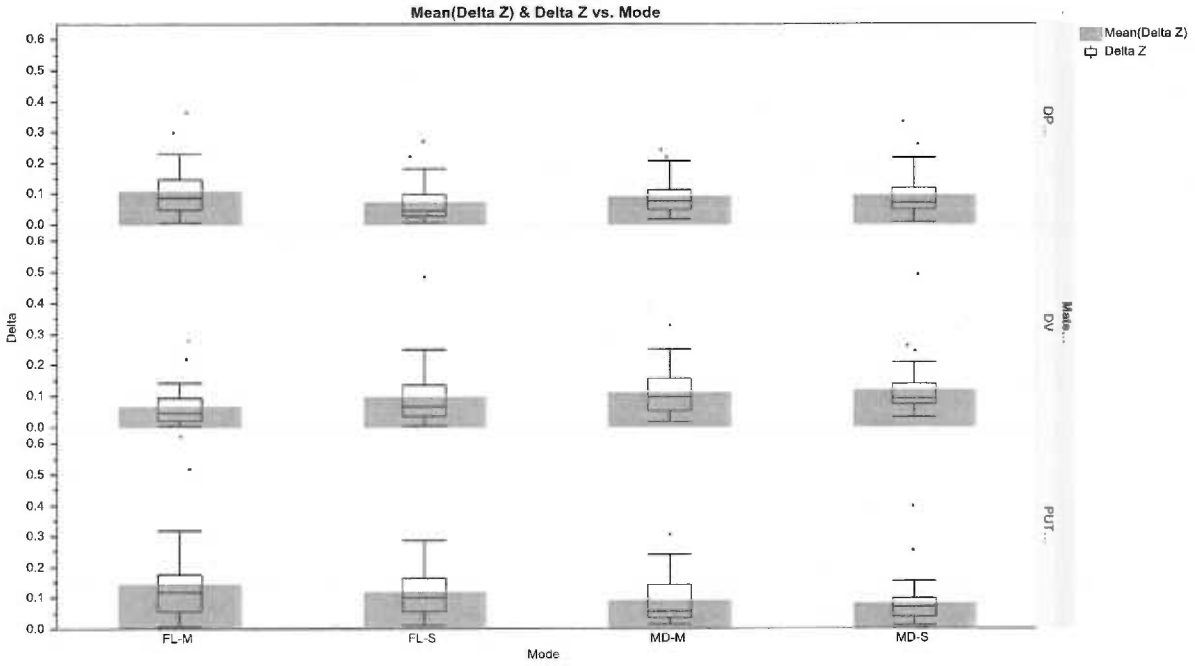
**Figure 10.**




(unit mm)




(unit mm)


Mean(Delta Z) & Delta Z vs. Mode
Mean(Delta Z)
Delta Z
Delta
0.6
0.5
0.4
0.3
0.2
0.1
0.0
DP...
DV
PUT...
FL-M
FL-S
MD-M
MD-S
Mode

(unit mm)

## LITERATURE REVIEW

### History of Bonding in Orthodontics

Direct bonding (DB) technique was initiated to overcome the difficulties encountered with full-mouth band orthodontics. Prior to the advent of bonding, orthodontist had to use bands with welded brackets to move teeth. However, there were some major issues associated with it: rampant decalcification under the bands, patient discomfort in fitting and cementing bands and the excessive band space to remove after completion of treatment.[44] With bonding, it eliminates these issues.[44] Some of the advantages of bonding were improved hygiene, better esthetics, improved patient comfort, reduced decalcification, reduced laboratory time to fabricate bands, reduced material costs, and elimination of band space closure following appliance removal. In 1955, Buonocore pioneered bonding to enamel surface using 85% orthophosphoric acid etch and methyl methacrylate.[1] In 1965, Newman saw a potential of bonding plastic brackets to replace bands by applying Buonocore's technique.[2] He used a combination of an adhesive mixture of bisphenol A and epichlorhydrin added with polyamide resin with 40% phosphoric acid to enhance the bond strength.[2]

But Newman quickly encountered challenges with this novel adhesive system. Any presence of moisture could significantly inhibit its polymerization process. Many practitioners at the time questioned if it was adequate to withstand mastication force and strong enough to adjust to the mouth's constant changes in temperature and pH. The arduous and lengthy procedure to polymerize epoxy resin was also not attractive to many clinicians.[3] To address these issues, Newman et al. in 1968 proposed a new bonding material, homo and copolymers of methyl methacrylate.[3]

In the early 1970s, composite resin, a mix of inorganic filler added to a resin matrix, was finally introduced to the field of orthodontics. Bowen developed bisphenol A glycidyl dimethacrylate (bisGMA) resin. It was far superior and more stable than any acrylic resins and had greater bond strength when added with inorganic inert filler.[12] This composite adhesive material was originally marketed for general dentistry, but many orthodontists attempted to use it to bond brackets.[4-6] Silverman et al. used 50% phosphoric acid etch and a combination of methyl methacrylate and filled low-viscosity resin (sealant) to indirect bond anterior and posterior teeth.[5] BisGMA resin became a widespread adhesive that remains in use to date.

**History of Indirect Bonding (IDB)**

As direct bonding became more popular, its technology rapidly advanced. However, there were still some major issues with it. The issues were the lengthy appointment to bond upper and lower arches and the difficulty to obtain complete isolation for bonding success. Additionally, with limited visualization, it was difficult to place the brackets accurately in the mouth, especially on posterior teeth.[7] Consequently, clinicians often had to reposition the brackets or place correctional bends in the archwire. In 1972, Silverman et al. pioneered an indirect bonding technique to overcome these issues.[7]

Indirect bonding requires brackets to be transferred from a model of the patient's teeth, called the working model, to the patient's mouth utilizing a transfer tray. Brackets are positioned ideally on the working model. Using an adhesive, a transfer tray is subsequently adapted over the brackets and extended over the facial, occlusal, and lingual surfaces for strength, rigidity, and accurate tray seating. When the tray is removed from the working model, the brackets remain

embedded in the tray. This tray is then transferred to the patient's mouth after the teeth are etched with phosphoric acid and bonding agent is applied. The tray is carefully seated against the teeth. Once the bonding agent is set, the tray is removed and the brackets should stay on the teeth. With meticulous isolation, this procedure allows the clinician to bond the entire arch all at once, improving patient's comfort and decreasing chair time. It also has the potential to offer much more accurate placement of brackets because the operator has unobstructed visual access to place the brackets during the laboratory phase. This is especially useful in bonding posterior teeth where the operator often has very limited visualization clinically when bonding directly.

During 1970s, as a newly introduced technique in its infancy, indirect bonding required the brackets to be adhered to the working model using various materials ranging from caramel candy to sticky wax or other adhesives.[7-10] Because these materials would need to be cleaned out entirely and would not bond to enamel, resin composite needed to be applied to the bracket mesh pad chairside prior to transferring. However, the resin composite had limited working time and was sensitive to surrounding light. Therefore, clinicians often had to rush the procedure so the composite would not cure prematurely.[8] For this reason, indirect bonding technique was not used widespread. A survey by Gorelick in 1979 showed that 67% of practicing orthodontists across the nation preferred direct bonding.[11]

It was not until 1979 that IDB proved to be an acceptable technique. Royce Thomas published a paper of a thorough step-by-step IDB procedure and introduced a single vacuum-formed transfer tray that used a 2-part chemical-cured filled bis-GMA resin agent as the material for adhering the brackets to the working model.[12] Thus, he pioneered the application of bonding agent in the laboratory. Clinically, the enamel surface was conditioned with 37% phosphoric acid before the application of 2-part chemical-cured unfilled bis-GMA resin to bond the brackets.

Because polymerization did not start until the two parts of the resin were joined together by seating of the IDB tray, this made IDB much simpler and user-friendly as it allowed the clinicians not to rush or worry about the material setting from the exposure of the surrounding light.[12]

IDB gained popularity in the mid-1980's after the advent of pre-adjusted appliances designed by Larry Andrews.[13] In order to fully benefit from the pre-adjusted fixed appliance, accurate bracket placement was imperative and this made IDB worth considering because it could potentially provide more accurate bracket positioning than direct bonding.

Subsequently, there were many different IDB tray techniques published during 1980's to 1990's as part of an attempt to make IDB more efficient and effective. During a Table Clinic event at an AAO annual meeting in 1981, Nakaji and Sheffield introduced and recommended a dual tray system in which two different materials could be sandwiched together to form a single tray.[14] The purpose was to provide a soft inner layer that allowed easy removal of the tray material without debonding the brackets and a harder outer layer to provide for rigidity of the tray.[14] Cooper pioneered utilizing adhesive pre-coated brackets (APC, 3M Unitek, Monrovia, CA) and used a double-tray transferring system consisting of an inner tray of 2mm clear, soft Bioplast® followed by an outer tray of 1.5mm clear, harder Biocryl®.[15] Hickman used a similar dual tray consisting of an inner tray of 1mm Bioplast® and an outer tray of 2mm Biocryl®.[16] White used a hot glue gun adhesive (ethylene vinyl acetate) to form a single IDB tray.[18] Kasrovi et al. used VLC triad gel material.[19] Read and Pearson used Memosil CD, a clear medium-bodied PVS used for bite registration purpose.[17]

In 1999, Sinha et al. and Moskowitz introduced the use of a heat-cured resin for indirect bonding using a dual tray system.[20,21] Polymerization of the resin required the model to be heated

in the oven at 325°F for 20 minutes. However, there were immediate drawbacks to this method. Brackets were floating while in the oven, and consequently, introducing errors. Also, it was cumbersome to heat the model to cure the resin, and this technique could not be done with ceramic brackets.[22]

Coincidently in 1999, Sondhi realized that IDB techniques had always used materials created for direct bonding. If using light-cured adhesive, clinicians often rushed during the procedure to prevent inadvertent curing of the adhesive, and it would take a while to hold the curing light in order to polymerize the composite resin on every tooth. However, using chemical-cured adhesive created for direct bonding was also ineffective. Setting time for adhesives designed for direct bonding took a little longer to allow the clinicians ample time to position the brackets intraorally, however, this was not required for indirect bonding. Therefore, in collaboration with 3M Unitek, Sondhi developed a 2-part filled resin specifically created for IDB use and that would cure in 2 minutes.[22] This resin also had more than double the bond strength compared to a similar chemical-cured direct bond adhesive immediately after curing.[22] This was an important feature since the bond strength needed to be sufficiently high to withstand immediate removal of the IDB tray.

Shortly after the introduction of the Sondhi™ Rapid-Set Indirect Bonding adhesive, Kalange introduced VPS putty tray material (Exaflex®, GCAmerica, Alsip, IL) as the transfer tray and used Sondhi™ Rapid-Set Indirect Bonding adhesive. He also presented individualized bracket positioning where the clinician did not use a bracket gauge but used patient's clinical crown heights instead.[23] This technique gave an accurate and customized bracket placement accommodating for different crown height and anatomy.

There were some techniques introduced using dual tray system comprised of soft inner and hard outer tray. Rocky Mountain's indirect bonding system, RMBond™, uses a dual tray system in which the inner tray is a layer of clear PVS material covered by an outer tray made of 1 mm vacuum-formed tray material.[24] The transparent property of the material allows the orthodontist to use light-cured adhesive. In 2000, Koga et al. presented Quick Indirect Bonding System to the market (Quick IDBS™): a dual tray system consisting of a light-body silicone (Emiluma™, Opal Orthodontics, South Jordan, UT) inner tray and medium-body silicone (Memosil®, Heraeus Kulzer, Hanau, Germany) outer tray.[25] The authors recommended using Sondhi™ Rapid-Set Indirect Bonding adhesive.

In an effort to continue to improve IDB technique, Ciufollo et al discussed utilization of CAD/CAM to design the IDB tray.[26] This technique requires an accurate silicone impression to make a model and a high-resolution optical 3-dimensional (3D) scanner to scan the model to mill the indirect bonding tray called Rapid Prototyping Tray. It uses semi rigid plastic material that allows the clinicians to use light-cured bonding agent. The CAD/CAM technology also has the capability to section the tray into an individual tooth positioner for future usage.

In contrast with the numerous published IDB tray methods, bonding agents used in IDB have not changed much since Thomas introduced the use of filled bis-GMA resin adhesive and unfilled resin (sealant) to bond the brackets onto the enamel surface.[12] The adhesive and sealant may come either as chemical cure or light cure. Read and O'Brien investigated the advantages of light-cured resin that could decrease the failure rate and increase bond strength.[27] The latest research showed that the combination of Transbond XT adhesive and Sondhi™ Rapid-Set Indirect Bonding sealant yielded high bond strength.[22,28-31] Kanashiro et al. reported that applying

Assure Universal Bonding Resin (Reliance Orthodontic Products Inc, Itasca, IL) prior to application of Sondhi™ Rapid-Set Indirect Bonding would significantly increase bond strength.[32]

**Direct Bonding (DB) vs. Indirect Bonding (IDB)**

With the growing popularity of indirect bonding, there have been many efforts shown in the current literature to examine differences with direct bonding technique in areas such as bracket positioning accuracy, bond strength, and office efficiency.

Advantages of IDB include[22,23]:

- Accurate bracket placement
- Full visualization to bond posterior teeth
- Maximization of the staff utilization
- Simultaneous bonding of an entire arch
- Minimized patient and doctor chair time
- Increased patient comfort

However, there are some disadvantages compared to DB[22,25]:

- Steep learning curve
- Technique sensitive
- Increased laboratory time
- Potentially high cost for the tray materials
- One extra appointment may be needed for impressions

In 1978, Zarichsson et al. made the first comparison between direct and indirect bonding.[10] The *in vivo* study used mesh and perforated brackets and 2 different adhesives to compare the

difference in hygiene, bond strength and overall difference working with the two techniques. This double-blind study concluded that direct bonding was more hygienic and resulted in higher bond strength. It also found that direct bonding was easier to work with as the excess adhesive was easily removed, and the brackets could be placed closer to the tooth surface.

In comparing any difference in bond strength, many studies reported no difference between the two techniques. Aguirre et al. conducted *in vitro* tests to measure shear bond strength in both DB and IDB.[33] The study showed great variability in bond strength but after 3 months, they found no significant difference in bracket bonding failures. Milne et al.'s study examined the difference in tensile and shear bond strengths between direct and indirect bonding. This *in vitro* study concluded that there was no difference between the two techniques. Furthermore, the study recommended the Thomas IDB technique as it decreased the clinician's stress level chairside, minimized formation of voids, and simplified post-bonding cleanup.[35] Another *in vitro* study by Yi et al. concluded that there was no difference in shear bond strength in either direct or indirect techniques.[28] However, this study was done only with extracted premolars. In 2006, Daub et al. examined the difference in shear bond strength between DB and IDB after thermocycling.[29] All teeth underwent 500 cycles of thermocycling in distilled water between 5°C and 55°C to mimic the constant temperature change in the oral environment. Though this dramatic temperature change decreased shear bond strength, there was no statistical difference between the two techniques.[29]

A few studies examined differences in bracket placement accuracy. In 1982, Aguirre et al. made this comparison *in-vivo* by taking pictures after brackets were placed in the patient's mouth.[33] This study concluded that angulation in maxillary and mandibular canines in IDB technique were more accurate than direct technique. But mandibular second premolars were more

ideally placed if bonded directly. Neither technique gave 100% precision and accuracy in bracket placement. However, Koo et al. found that IDB was more accurate in bracket height but the two techniques were not statistically significant in angulation or mesiodistal position of the brackets.[34] This study also agreed with Aguirre et al. that neither technique provided ideal bracket placement.

Although there have been many *in vitro* studies, the topic of differences between direct and indirect bonding have been further evaluated in *in vivo* studies. In 2004, Hodge et al. compared bracket placement accuracy between DB and IDB.[36] This prospective randomized clinical trial concluded that there was no difference in mean bracket placement errors between the two techniques. However, they did find that the range of error in three directions was greater in DB than IDB. Another clinical study by Deahl et al. agreed with these findings.[37] Deahl et al. used a practice-based research model to examine which technique was more efficient and effective. The study found that bond failure rate, treatment duration, and number of appointments did not differ between DB and IDB.[37] Other studies by Thiyagarajah et al. and Bozelli et al. showed similar results.[38,39]

While several studies have compared direct bonding to indirect bonding, only one study by Wendl et al. measured bracket placement accuracy of an indirect bonding technique.[40] The study evaluated the Aptus Bonding Device (ABD), a horseshoe-shaped instrument with seven compressed air-driven pistons that used steel wires to transfer the brackets from the model to the patient's mouth. The accuracy of bracket positioning was assessed by photographic superimpositions and found to be extremely high.[40]

**Effect of Different Indirect Bonding Tray Methods in Bracket Placement Accuracy**

While there are numerous indirect bonding techniques described in the literature, there are very few studies comparing them. Although it is a personal decision to choose which technique works best for the orthodontist, it is also crucial to understand which technique provides the most accurate bracket placement that is the most cost-effective and give the most consistent results. The study by Castilla et al. clearly showed differences between various IDB techniques.[41] The authors stated that PVS putty (Kalange technique), double PVS (Quick IDBS™), and PVS-VF (Moskowitz technique) were highly accurate in bracket transferring while single and double vacuum form methods were not as accurate. However, PVS putty was the most cost-effective.[41] Similarly, Dörfer et al. reported that silicone tray material was more accurate than a thermoplastic vacuum-formed tray.[42] One unpublished thesis from the University of Illinois at Chicago compared bracket transfer accuracy in 4 IDB techniques: RMBond™ single tray system, hot glue gun tray, RMBond™ double tray (hybrid of PVS and vacuum-formed tray), and Essix® double-vacuum formed tray.[43] They showed that although all four techniques were found to be accurate, RMBond™ double tray system showed more errors compared to the other tray methods.

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**Appendix 1**: Intra-rater reliability test

## Preworking

| X | Paired T test | PCC |
|---|---|---|
| A1 vs. A2 | 0.0001 | 1 |
| A1 vs. A3 | 0.0001 | 0.9999 |
| A2 vs. A3 | 0.4735 | 1 |

| Y | Paired T test | PCC |
|---|---|---|
| A1 vs. A2 | 0.1594 | 0.9999 |
| A1 vs. A3 | 0.0521 | 0.9999 |
| A2 vs. A3 | 0.3849 | 0.9999 |

| X | Paired T test | PCC |
|---|---|---|
| B1 vs. B2 | 0.001 | 0.9999 |
| B1 vs. B3 | 0.0641 | 0.9996 |
| B2 vs. B3 | 0.1307 | 0.9996 |

| Y | Paired T test | PCC |
|---|---|---|
| B1 vs. B2 | 0.2781 | 0.9999 |
| B1 vs. B3 | 0.0123 | 0.9999 |
| B2 vs. B3 | 0.0419 | 0.9999 |

| Z | Paired T test | PCC |
|---|---|---|
| C1 vs. C2 | 0.0153 | 0.9999 |
| C1 vs. C3 | 0.0001 | 0.9999 |
| C2 vs. C3 | 0.0001 | 0.9999 |

| Z | Paired T test | PCC |
|---|---|---|
| D1 vs. D2 | 0.0057 | 0.9989 |
| D1 vs. D3 | 0.0001 | 0.9999 |
| D2 vs. D3 | 0.4559 | 0.9989 |

## Postpatient

| X | Paired T test | PCC |
|---|---|---|
| A1 vs. A2 | 0.0001 | 1 |
| A1 vs. A3 | 0.0001 | 1 |
| A2 vs. A3 | 0.0131 | 1 |

| Y | Paired T test | PCC |
|---|---|---|
| A1 vs. A2 | 0.0595 | 0.9999 |
| A1 vs. A3 | 0.075 | 0.9999 |
| A2 vs. A3 | 0.8821 | 0.9999 |

| X | Paired T test | PCC |
|---|---|---|
| B1 vs. B2 | 0.1553 | 0.9999 |
| B1 vs. B3 | 0.0045 | 0.9999 |
| B2 vs. B3 | 0.0188 | 1 |

| Y | Paired T test | PCC |
|---|---|---|
| B1 vs. B2 | 0.2936 | 0.9999 |
| B1 vs. B3 | 0.0004 | 0.9999 |
| B2 vs. B3 | 0.0006 | 0.9999 |

| Z | Paired T test | PCC |
|---|---|---|
| C1 vs. C2 | 0.3818 | 0.9999 |
| C1 vs. C3 | 0.0001 | 0.9999 |
| C2 vs. C3 | 0.0001 | 0.9999 |

| Z | Paired T test | PCC |
|---|---|---|
| D1 vs. D2 | 0.003 | 0.9999 |
| D1 vs. D3 | 0.0001 | 0.9999 |
| D2 vs. D3 | 0.0001 | 0.9999 |

| A1X | Paired T test | PCC |
|---|---|---|
| AW vs. SL | 0.2103 | 0.9039 |
| AW vs. Data | 0.364 | 0.9992 |
| SL vs. Data | 0.1831 | 0.9048 |

| A1Y | Paired T test | PCC |
|---|---|---|
| AW vs. SL | 0.0001 | 0.9986 |
| AW vs. Data | 0.5482 | 0.9921 |
| SL vs. Data | 0.0021 | 0.991 |

| B1X | Paired T test | PCC |
|---|---|---|
| AW vs. SL | 0.2905 | 0.9556 |
| AW vs. Data | 0.8149 | 0.9994 |
| SL vs. Data | 0.2798 | 0.956 |

| B1Y | Paired T test | PCC |
|---|---|---|
| AW vs. SL | 0.0001 | 0.9985 |
| AW vs. Data | 0.4172 | 0.9887 |
| SL vs. Data | 0.0142 | 0.9884 |

| C1 | Paired T test | PCC |
|---|---|---|
| AW vs. SL | 0.0536 | 0.9797 |
| AW vs. Data | 0.0002 | 0.9951 |
| SL vs. Data | 0.8263 | 0.9843 |

| D1 | Paired T test | PCC |
|---|---|---|
| AW vs. SL | 0.0003 | 0.9793 |
| AW vs. Data | 0.0001 | 0.9968 |
| SL vs. Data | 0.5974 | 0.9785 |

**Appendix 2**: Descriptive statistics and intra-group differences

| Model | Material | Tooth | Location | Obs | Variables | Mean | Std Dev | Std Err | Min | Max | Paired T test p value* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | DPVS | UL1 | AX | 3 | W Mean | 7.814 | 0.072 | 0.041 | 7.757 | 7.894 | 0.874 |
| A | DPVS | UL1 | AX | 3 | P Mean | 7.819 | 0.027 | 0.016 | 7.788 | 7.837 | |
| A | DPVS | UL1 | AY | 3 | W Mean | 10.646 | 0.351 | 0.203 | 10.317 | 11.016 | 0.1617 |
| A | DPVS | UL1 | AY | 3 | P Mean | 10.515 | 0.365 | 0.211 | 10.116 | 10.833 | |
| A | DPVS | UL1 | BX | 3 | W Mean | 9.385 | 0.074 | 0.043 | 9.309 | 9.456 | 0.442 |
| A | DPVS | UL1 | BX | 3 | P Mean | 9.411 | 0.034 | 0.020 | 9.371 | 9.432 | |
| A | DPVS | UL1 | BY | 3 | W Mean | 10.686 | 0.349 | 0.201 | 10.362 | 11.055 | 0.143 |
| A | DPVS | UL1 | BY | 3 | P Mean | 10.555 | 0.366 | 0.211 | 10.161 | 10.885 | |
| A | DPVS | UL1 | C | 3 | W Mean | 13.053 | 0.096 | 0.055 | 12.947 | 13.133 | 0.881 |
| A | DPVS | UL1 | C | 3 | P Mean | 13.047 | 0.104 | 0.060 | 12.937 | 13.143 | |
| A | DPVS | UL1 | D | 3 | W Mean | 13.192 | 0.065 | 0.038 | 13.117 | 13.230 | 0.213 |
| A | DPVS | UL1 | D | 3 | P Mean | 13.132 | 0.078 | 0.045 | 13.070 | 13.220 | |
| A | DPVS | UL2 | AX | 3 | W Mean | 8.597 | 0.328 | 0.189 | 8.219 | 8.802 | 0.314 |
| A | DPVS | UL2 | AX | 3 | P Mean | 8.566 | 0.364 | 0.210 | 8.148 | 8.813 | |
| A | DPVS | UL2 | AY | 3 | W Mean | 11.144 | 0.496 | 0.287 | 10.842 | 11.717 | 0.251 |
| A | DPVS | UL2 | AY | 3 | P Mean | 10.942 | 0.301 | 0.174 | 10.689 | 11.275 | |
| A | DPVS | UL2 | BX | 3 | W Mean | 9.610 | 0.298 | 0.172 | 9.268 | 9.807 | 0.159 |
| A | DPVS | UL2 | BX | 3 | P Mean | 9.576 | 0.324 | 0.187 | 9.204 | 9.796 | |
| A | DPVS | UL2 | BY | 3 | W Mean | 11.155 | 0.477 | 0.276 | 10.857 | 11.706 | 0.2573 |
| A | DPVS | UL2 | BY | 3 | P Mean | 10.965 | 0.304 | 0.176 | 10.694 | 11.294 | |
| A | DPVS | UL2 | C | 3 | W Mean | 13.73 | 0.033 | 0.01 | 13.69 | 13.76 | 0.418 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 1 | | 9 | 7 | 3 | |
| A | DPVS | UL2 | C | 3 | P Mean | 13.675 | 0.079 | 0.046 | 13.603 | 13.760 | |
| A | DPVS | UL2 | D | 3 | W Mean | 13.542 | 0.073 | 0.042 | 13.463 | 13.607 | 0.2713 |
| A | DPVS | UL2 | D | 3 | P Mean | 13.483 | 0.072 | 0.042 | 13.423 | 13.563 | |
| A | DPVS | UL3 | AX | 3 | W Mean | 4.713 | 0.262 | 0.151 | 4.549 | 5.015 | 0.513 |
| A | DPVS | UL3 | AX | 3 | P Mean | 4.681 | 0.271 | 0.156 | 4.472 | 4.987 | |
| A | DPVS | UL3 | AY | 3 | W Mean | 11.103 | 0.120 | 0.069 | 10.965 | 11.188 | 0.2099 |
| A | DPVS | UL3 | AY | 3 | P Mean | 10.971 | 0.030 | 0.017 | 10.939 | 10.998 | |
| A | DPVS | UL3 | BX | 3 | W Mean | 5.988 | 0.266 | 0.154 | 5.824 | 6.295 | 0.568 |
| A | DPVS | UL3 | BX | 3 | P Mean | 5.959 | 0.272 | 0.157 | 5.744 | 6.265 | |
| A | DPVS | UL3 | BY | 3 | W Mean | 11.116 | 0.113 | 0.065 | 10.999 | 11.225 | 0.2237 |
| A | DPVS | UL3 | BY | 3 | P Mean | 10.983 | 0.070 | 0.040 | 10.903 | 11.029 | |
| A | DPVS | UL3 | C | 3 | W Mean | 11.532 | 0.081 | 0.047 | 11.440 | 11.593 | 0.956 |
| A | DPVS | UL3 | C | 3 | P Mean | 11.531 | 0.088 | 0.051 | 11.430 | 11.593 | |
| A | DPVS | UL3 | D | 3 | W Mean | 11.778 | 0.012 | 0.007 | 11.767 | 11.790 | 0.0401 * |
| A | DPVS | UL3 | D | 3 | P Mean | 11.727 | 0.010 | 0.006 | 11.717 | 11.737 | |
| A | DPVS | UL4 | AX | 3 | W Mean | 8.327 | 0.240 | 0.138 | 8.056 | 8.510 | 0.127 |
| A | DPVS | UL4 | AX | 3 | P Mean | 8.284 | 0.269 | 0.155 | 7.979 | 8.485 | |
| A | DPVS | UL4 | AY | 3 | W Mean | 11.246 | 0.251 | 0.145 | 11.095 | 11.536 | 0.0817 |
| A | DPVS | UL4 | AY | 3 | P Mean | 10.911 | 0.095 | 0.055 | 10.817 | 11.006 | |
| A | DPVS | UL4 | BX | 3 | W Mean | 9.586 | 0.275 | 0.159 | 9.277 | 9.804 | 0.036 |
| A | DPVS | UL4 | BX | 3 | P Mean | 9.509 | 0.298 | 0.172 | 9.177 | 9.755 | |
| A | DPVS | UL4 | BY | 3 | W Mean | 11.266 | 0.242 | 0.139 | 11.101 | 11.543 | 0.0842 |
| A | DPVS | UL4 | BY | 3 | P Mean | 10.927 | 0.073 | 0.042 | 10.858 | 11.004 | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | DPVS | UL4 | C | 3 | W Mean | 10.274 | 0.022 | 0.013 | 10.253 | 10.297 | 0.226 |
| A | DPVS | UL4 | C | 3 | P Mean | 10.220 | 0.072 | 0.042 | 10.137 | 10.263 | |
| A | DPVS | UL4 | D | 3 | W Mean | 10.139 | 0.013 | 0.008 | 10.127 | 10.153 | 0.8071 |
| A | DPVS | UL4 | D | 3 | P Mean | 10.127 | 0.069 | 0.040 | 10.060 | 10.197 | |
| A | DPVS | UL5 | AX | 3 | W Mean | 7.839 | 0.153 | 0.088 | 7.698 | 8.002 | 0.163 |
| A | DPVS | UL5 | AX | 3 | P Mean | 7.766 | 0.133 | 0.077 | 7.618 | 7.876 | |
| A | DPVS | UL5 | AY | 3 | W Mean | 13.871 | 0.152 | 0.088 | 13.737 | 14.036 | 0.2135 |
| A | DPVS | UL5 | AY | 3 | P Mean | 13.815 | 0.157 | 0.091 | 13.644 | 13.953 | |
| A | DPVS | UL5 | BX | 3 | W Mean | 9.056 | 0.176 | 0.102 | 8.865 | 9.212 | 0.250 |
| A | DPVS | UL5 | BX | 3 | P Mean | 9.000 | 0.156 | 0.090 | 8.820 | 9.090 | |
| A | DPVS | UL5 | BY | 3 | W Mean | 13.754 | 0.138 | 0.080 | 13.627 | 13.901 | 0.3625 |
| A | DPVS | UL5 | BY | 3 | P Mean | 13.703 | 0.145 | 0.084 | 13.537 | 13.802 | |
| A | DPVS | UL5 | C | 3 | W Mean | 9.738 | 0.029 | 0.016 | 9.710 | 9.767 | 0.755 |
| A | DPVS | UL5 | C | 3 | P Mean | 9.760 | 0.117 | 0.068 | 9.643 | 9.877 | |
| A | DPVS | UL5 | D | 3 | W Mean | 9.495 | 0.062 | 0.036 | 9.427 | 9.550 | 0.9683 |
| A | DPVS | UL5 | D | 3 | P Mean | 9.498 | 0.160 | 0.092 | 9.337 | 9.657 | |
| A | DPVS | UL6 | AX | 3 | W Mean | 3.162 | 0.315 | 0.182 | 2.961 | 3.525 | 0.461 |
| A | DPVS | UL6 | AX | 3 | P Mean | 3.132 | 0.341 | 0.197 | 2.868 | 3.517 | |
| A | DPVS | UL6 | AY | 3 | W Mean | 11.408 | 0.316 | 0.183 | 11.119 | 11.746 | 0.168 |
| A | DPVS | UL6 | AY | 3 | P Mean | 11.309 | 0.383 | 0.221 | 10.926 | 11.692 | |
| A | DPVS | UL6 | BX | 3 | W Mean | 5.267 | 0.305 | 0.176 | 5.057 | 5.617 | 0.701 |
| A | DPVS | UL6 | BX | 3 | P Mean | 5.250 | 0.345 | 0.199 | 4.960 | 5.631 | |
| A | DPVS | UL6 | BY | 3 | W Mean | 11.441 | 0.232 | 0.134 | 11.241 | 11.695 | 0.1238 |
| A | DPVS | UL6 | BY | 3 | P Mean | 11.31 | 0.306 | 0.17 | 11.01 | 11.62 | |

| | | | | | | 2 | | 6 | 2 | 3 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | DPVS | UL6 | C | 3 | W Mean | 8.077 | 0.066 | 0.038 | 8.007 | 8.137 | 0.895 |
| A | DPVS | UL6 | C | 3 | P Mean | 8.081 | 0.104 | 0.060 | 7.997 | 8.197 | |
| A | DPVS | UL6 | D | 3 | W Mean | 8.231 | 0.092 | 0.053 | 8.153 | 8.333 | 0.7468 |
| A | DPVS | UL6 | D | 3 | P Mean | 8.247 | 0.165 | 0.095 | 8.120 | 8.433 | |
| A | DPVS | UR1 | AX | 3 | W Mean | 7.162 | 0.041 | 0.024 | 7.115 | 7.188 | 0.669 |
| A | DPVS | UR1 | AX | 3 | P Mean | 7.181 | 0.107 | 0.062 | 7.060 | 7.261 | |
| A | DPVS | UR1 | AY | 3 | W Mean | 11.226 | 0.276 | 0.159 | 10.990 | 11.529 | 0.9931 |
| A | DPVS | UR1 | AY | 3 | P Mean | 11.229 | 0.140 | 0.081 | 11.095 | 11.375 | |
| A | DPVS | UR1 | BX | 3 | W Mean | 8.732 | 0.046 | 0.027 | 8.679 | 8.759 | 0.871 |
| A | DPVS | UR1 | BX | 3 | P Mean | 8.740 | 0.121 | 0.070 | 8.601 | 8.820 | |
| A | DPVS | UR1 | BY | 3 | W Mean | 11.195 | 0.271 | 0.156 | 10.977 | 11.498 | 0.9642 |
| A | DPVS | UR1 | BY | 3 | P Mean | 11.207 | 0.145 | 0.084 | 11.068 | 11.358 | |
| A | DPVS | UR1 | C | 3 | W Mean | 13.299 | 0.083 | 0.048 | 13.203 | 13.347 | 1.000 |
| A | DPVS | UR1 | C | 3 | P Mean | 13.299 | 0.062 | 0.036 | 13.233 | 13.357 | |
| A | DPVS | UR1 | D | 3 | W Mean | 13.607 | 0.070 | 0.040 | 13.527 | 13.657 | 0.9904 |
| A | DPVS | UR1 | D | 3 | P Mean | 13.607 | 0.042 | 0.024 | 13.563 | 13.647 | |
| A | DPVS | UR2 | AX | 3 | W Mean | 6.878 | 0.218 | 0.126 | 6.634 | 7.054 | 0.941 |
| A | DPVS | UR2 | AX | 3 | P Mean | 6.881 | 0.233 | 0.135 | 6.612 | 7.021 | |
| A | DPVS | UR2 | AY | 3 | W Mean | 14.164 | 0.095 | 0.055 | 14.056 | 14.238 | 0.4538 |
| A | DPVS | UR2 | AY | 3 | P Mean | 14.017 | 0.182 | 0.105 | 13.896 | 14.227 | |
| A | DPVS | UR2 | BX | 3 | W Mean | 7.908 | 0.222 | 0.128 | 7.662 | 8.093 | 0.571 |
| A | DPVS | UR2 | BX | 3 | P Mean | 7.874 | 0.222 | 0.128 | 7.619 | 8.025 | |
| A | DPVS | UR2 | BY | 3 | W Mean | 14.159 | 0.096 | 0.055 | 14.049 | 14.222 | 0.416 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | DPVS | UR2 | BY | 3 | P Mean | 14.004 | 0.169 | 0.098 | 13.898 | 14.199 | |
| A | DPVS | UR2 | C | 3 | W Mean | 13.704 | 0.120 | 0.069 | 13.627 | 13.843 | 0.845 |
| A | DPVS | UR2 | C | 3 | P Mean | 13.695 | 0.050 | 0.029 | 13.660 | 13.753 | |
| A | DPVS | UR2 | D | 3 | W Mean | 13.683 | 0.061 | 0.035 | 13.630 | 13.750 | 0.7099 |
| A | DPVS | UR2 | D | 3 | P Mean | 13.692 | 0.045 | 0.026 | 13.640 | 13.723 | |
| A | DPVS | UR3 | AX | 3 | W Mean | 15.678 | 11.570 | 6.680 | 8.624 | 29.031 | 0.351 |
| A | DPVS | UR3 | AX | 3 | P Mean | 15.757 | 11.582 | 6.687 | 8.807 | 29.127 | |
| A | DPVS | UR3 | AY | 3 | W Mean | 12.200 | 0.180 | 0.104 | 12.058 | 12.402 | 0.3311 |
| A | DPVS | UR3 | AY | 3 | P Mean | 12.048 | 0.046 | 0.027 | 12.011 | 12.100 | |
| A | DPVS | UR3 | BX | 3 | W Mean | 16.974 | 11.619 | 6.708 | 9.902 | 30.383 | 0.325 |
| A | DPVS | UR3 | BX | 3 | P Mean | 17.049 | 11.603 | 6.699 | 10.085 | 30.443 | |
| A | DPVS | UR3 | BY | 3 | W Mean | 12.197 | 0.181 | 0.105 | 12.029 | 12.389 | 0.3437 |
| A | DPVS | UR3 | BY | 3 | P Mean | 12.050 | 0.026 | 0.015 | 12.025 | 12.076 | |
| A | DPVS | UR3 | C | 3 | W Mean | 11.762 | 0.139 | 0.080 | 11.647 | 11.917 | 0.884 |
| A | DPVS | UR3 | C | 3 | P Mean | 11.774 | 0.017 | 0.010 | 11.760 | 11.793 | |
| A | DPVS | UR3 | D | 3 | W Mean | 12.073 | 0.136 | 0.079 | 11.983 | 12.230 | 0.646 |
| A | DPVS | UR3 | D | 3 | P Mean | 12.044 | 0.058 | 0.033 | 11.987 | 12.103 | |
| A | DPVS | UR4 | AX | 3 | W Mean | 8.621 | 0.123 | 0.071 | 8.524 | 8.760 | 0.791 |
| A | DPVS | UR4 | AX | 3 | P Mean | 8.635 | 0.099 | 0.057 | 8.539 | 8.737 | |
| A | DPVS | UR4 | AY | 3 | W Mean | 13.495 | 0.432 | 0.250 | 12.996 | 13.750 | 0.0476 |
| A | DPVS | UR4 | AY | 3 | P Mean | 13.330 | 0.370 | 0.214 | 12.903 | 13.564 | |
| A | DPVS | UR4 | BX | 3 | W Mean | 9.914 | 0.132 | 0.076 | 9.798 | 10.057 | 0.929 |
| A | DPVS | UR4 | BX | 3 | P Mean | 9.920 | 0.080 | 0.046 | 9.838 | 9.998 | |
| A | DPVS | UR4 | BY | 3 | W Mean | 13.51 | 0.451 | 0.26 | 12.99 | 13.78 | 0.0581 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 1 | | 0 | 0 | 6 | |
| A | DPVS | UR4 | BY | 3 | P Mean | 13.352 | 0.386 | 0.223 | 12.906 | 13.585 | |
| A | DPVS | UR4 | C | 3 | W Mean | 9.599 | 0.085 | 0.049 | 9.513 | 9.683 | 0.186 |
| A | DPVS | UR4 | C | 3 | P Mean | 9.514 | 0.082 | 0.048 | 9.440 | 9.603 | |
| A | DPVS | UR4 | D | 3 | W Mean | 9.371 | 0.094 | 0.054 | 9.273 | 9.460 | 0.1109 |
| A | DPVS | UR4 | D | 3 | P Mean | 9.277 | 0.056 | 0.033 | 9.213 | 9.320 | |
| A | DPVS | UR5 | AX | 3 | W Mean | 7.782 | 0.445 | 0.257 | 7.284 | 8.138 | 0.082 |
| A | DPVS | UR5 | AX | 3 | P Mean | 7.894 | 0.390 | 0.225 | 7.463 | 8.224 | |
| A | DPVS | UR5 | AY | 3 | W Mean | 11.880 | 0.315 | 0.182 | 11.517 | 12.072 | 0.2087 |
| A | DPVS | UR5 | AY | 3 | P Mean | 11.747 | 0.269 | 0.155 | 11.458 | 11.990 | |
| A | DPVS | UR5 | BX | 3 | W Mean | 9.004 | 0.447 | 0.258 | 8.500 | 9.352 | 0.262 |
| A | DPVS | UR5 | BX | 3 | P Mean | 9.090 | 0.367 | 0.212 | 8.692 | 9.414 | |
| A | DPVS | UR5 | BY | 3 | W Mean | 11.962 | 0.270 | 0.156 | 11.650 | 12.121 | 0.2462 |
| A | DPVS | UR5 | BY | 3 | P Mean | 11.823 | 0.224 | 0.129 | 11.609 | 12.055 | |
| A | DPVS | UR5 | C | 3 | W Mean | 9.506 | 0.020 | 0.011 | 9.483 | 9.517 | 0.190 |
| A | DPVS | UR5 | C | 3 | P Mean | 9.392 | 0.097 | 0.056 | 9.290 | 9.483 | |
| A | DPVS | UR5 | D | 3 | W Mean | 9.515 | 0.024 | 0.014 | 9.487 | 9.530 | 0.1414 |
| A | DPVS | UR5 | D | 3 | P Mean | 9.399 | 0.076 | 0.044 | 9.317 | 9.467 | |
| A | DPVS | UR6 | AX | 3 | W Mean | 7.902 | 0.115 | 0.066 | 7.784 | 8.014 | 0.079 |
| A | DPVS | UR6 | AX | 3 | P Mean | 8.050 | 0.126 | 0.073 | 7.969 | 8.195 | |
| A | DPVS | UR6 | AY | 3 | W Mean | 10.310 | 0.057 | 0.033 | 10.250 | 10.363 | 0.1613 |
| A | DPVS | UR6 | AY | 3 | P Mean | 10.092 | 0.230 | 0.133 | 9.863 | 10.322 | |
| A | DPVS | UR6 | BX | 3 | W Mean | 10.039 | 0.113 | 0.065 | 9.928 | 10.154 | 0.319 |
| A | DPVS | UR6 | BX | 3 | P Mean | 10.139 | 0.140 | 0.081 | 9.994 | 10.273 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| A | DPVS | UR6 | BY | 3 | W Mean | 10.335 | 0.138 | 0.080 | 10.239 | 10.493 | 0.089 |
| A | DPVS | UR6 | BY | 3 | P Mean | 10.104 | 0.260 | 0.150 | 9.932 | 10.403 | |
| A | DPVS | UR6 | C | 3 | W Mean | 7.063 | 0.041 | 0.023 | 7.017 | 7.093 | 0.0029 * |
| A | DPVS | UR6 | C | 3 | P Mean | 6.920 | 0.032 | 0.018 | 6.887 | 6.950 | |
| A | DPVS | UR6 | D | 3 | W Mean | 7.818 | 0.097 | 0.056 | 7.710 | 7.897 | 0.258 |
| A | DPVS | UR6 | D | 3 | P Mean | 7.620 | 0.125 | 0.072 | 7.490 | 7.740 | |
| A | DVF | UL1 | AX | 3 | W Mean | 7.778 | 0.190 | 0.110 | 7.621 | 7.989 | 0.113 |
| A | DVF | UL1 | AX | 3 | P Mean | 7.892 | 0.122 | 0.071 | 7.811 | 8.033 | |
| A | DVF | UL1 | AY | 3 | W Mean | 10.637 | 0.227 | 0.131 | 10.445 | 10.887 | 0.7965 |
| A | DVF | UL1 | AY | 3 | P Mean | 10.609 | 0.076 | 0.044 | 10.524 | 10.669 | |
| A | DVF | UL1 | BX | 3 | W Mean | 9.397 | 0.156 | 0.090 | 9.271 | 9.572 | 0.0344 * |
| A | DVF | UL1 | BX | 3 | P Mean | 9.475 | 0.134 | 0.077 | 9.358 | 9.621 | |
| A | DVF | UL1 | BY | 3 | W Mean | 10.674 | 0.228 | 0.132 | 10.513 | 10.935 | 0.6906 |
| A | DVF | UL1 | BY | 3 | P Mean | 10.623 | 0.039 | 0.022 | 10.589 | 10.665 | |
| A | DVF | UL1 | C | 3 | W Mean | 13.124 | 0.059 | 0.034 | 13.057 | 13.163 | 0.733 |
| A | DVF | UL1 | C | 3 | P Mean | 13.106 | 0.140 | 0.081 | 12.947 | 13.213 | |
| A | DVF | UL1 | D | 3 | W Mean | 13.225 | 0.016 | 0.009 | 13.213 | 13.243 | 0.3372 |
| A | DVF | UL1 | D | 3 | P Mean | 13.146 | 0.120 | 0.069 | 13.007 | 13.217 | |
| A | DVF | UL2 | AX | 3 | W Mean | 8.060 | 0.082 | 0.047 | 7.995 | 8.152 | 0.921 |
| A | DVF | UL2 | AX | 3 | P Mean | 8.066 | 0.168 | 0.097 | 7.958 | 8.259 | |
| A | DVF | UL2 | AY | 3 | W Mean | 11.210 | 0.381 | 0.220 | 10.881 | 11.627 | 0.375 |
| A | DVF | UL2 | AY | 3 | P Mean | 10.937 | 0.146 | 0.084 | 10.835 | 11.104 | |
| A | DVF | UL2 | BX | 3 | W Mean | 9.092 | 0.113 | 0.066 | 9.024 | 9.223 | 0.383 |
| A | DVF | UL2 | BX | 3 | P Mean | 9.065 | 0.152 | 0.08 | 8.963 | 9.240 | |

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| A | DVF | UL2 | BY | 3 | W Mean | 11.216 | 0.419 | 0.242 | 10.864 | 11.679 | 0.3165 |
| A | DVF | UL2 | BY | 3 | P Mean | 10.933 | 0.173 | 0.100 | 10.744 | 11.082 | |
| A | DVF | UL2 | C | 3 | W Mean | 13.744 | 0.026 | 0.015 | 13.723 | 13.773 | 0.524 |
| A | DVF | UL2 | C | 3 | P Mean | 13.639 | 0.244 | 0.141 | 13.357 | 13.790 | |
| A | DVF | UL2 | D | 3 | W Mean | 13.615 | 0.077 | 0.044 | 13.560 | 13.703 | 0.3526 |
| A | DVF | UL2 | D | 3 | P Mean | 13.393 | 0.243 | 0.141 | 13.120 | 13.587 | |
| A | DVF | UL3 | AX | 3 | W Mean | 4.494 | 0.339 | 0.196 | 4.130 | 4.800 | 0.379 |
| A | DVF | UL3 | AX | 3 | P Mean | 4.403 | 0.388 | 0.224 | 4.072 | 4.830 | |
| A | DVF | UL3 | AY | 3 | W Mean | 11.445 | 0.640 | 0.369 | 11.031 | 12.182 | 0.3489 |
| A | DVF | UL3 | AY | 3 | P Mean | 10.957 | 0.058 | 0.033 | 10.891 | 10.998 | |
| A | DVF | UL3 | BX | 3 | W Mean | 5.800 | 0.440 | 0.254 | 5.324 | 6.192 | 0.297 |
| A | DVF | UL3 | BX | 3 | P Mean | 5.660 | 0.471 | 0.272 | 5.256 | 6.178 | |
| A | DVF | UL3 | BY | 3 | W Mean | 11.378 | 0.632 | 0.365 | 10.972 | 12.106 | 0.3607 |
| A | DVF | UL3 | BY | 3 | P Mean | 10.906 | 0.067 | 0.039 | 10.834 | 10.967 | |
| A | DVF | UL3 | C | 3 | W Mean | 11.507 | 0.010 | 0.006 | 11.497 | 11.517 | 0.750 |
| A | DVF | UL3 | C | 3 | P Mean | 11.529 | 0.106 | 0.061 | 11.413 | 11.620 | |
| A | DVF | UL3 | D | 3 | W Mean | 11.777 | 0.114 | 0.066 | 11.650 | 11.870 | 0.4996 |
| A | DVF | UL3 | D | 3 | P Mean | 11.720 | 0.116 | 0.067 | 11.620 | 11.847 | |
| A | DVF | UL4 | AX | 3 | W Mean | 8.066 | 0.030 | 0.017 | 8.035 | 8.094 | 0.295 |
| A | DVF | UL4 | AX | 3 | P Mean | 8.037 | 0.038 | 0.022 | 8.003 | 8.078 | |
| A | DVF | UL4 | AY | 3 | W Mean | 11.374 | 0.070 | 0.040 | 11.294 | 11.421 | 0.4762 |
| A | DVF | UL4 | AY | 3 | P Mean | 11.207 | 0.344 | 0.199 | 10.903 | 11.581 | |
| A | DVF | UL4 | BX | 3 | W Mean | 9.352 | 0.071 | 0.041 | 9.296 | 9.432 | 0.240 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| A | DVF | UL4 | BX | 3 | P Mean | 9.273 | 0.040 | 0.023 | 9.241 | 9.318 | |
| A | DVF | UL4 | BY | 3 | W Mean | 11.402 | 0.072 | 0.042 | 11.319 | 11.454 | 0.4261 |
| A | DVF | UL4 | BY | 3 | P Mean | 11.236 | 0.286 | 0.165 | 10.996 | 11.553 | |
| A | DVF | UL4 | C | 3 | W Mean | 10.189 | 0.084 | 0.048 | 10.123 | 10.283 | 0.684 |
| A | DVF | UL4 | C | 3 | P Mean | 10.229 | 0.068 | 0.039 | 10.153 | 10.283 | |
| A | DVF | UL4 | D | 3 | W Mean | 10.086 | 0.062 | 0.036 | 10.043 | 10.157 | 0.9925 |
| A | DVF | UL4 | D | 3 | P Mean | 10.087 | 0.102 | 0.059 | 9.970 | 10.160 | |
| A | DVF | UL5 | AX | 3 | W Mean | 7.725 | 0.257 | 0.148 | 7.566 | 8.022 | 0.608 |
| A | DVF | UL5 | AX | 3 | P Mean | 7.680 | 0.129 | 0.074 | 7.600 | 7.829 | |
| A | DVF | UL5 | AY | 3 | W Mean | 13.969 | 0.277 | 0.160 | 13.699 | 14.252 | 0.3189 |
| A | DVF | UL5 | AY | 3 | P Mean | 13.765 | 0.341 | 0.197 | 13.391 | 14.058 | |
| A | DVF | UL5 | BX | 3 | W Mean | 9.003 | 0.302 | 0.174 | 8.763 | 9.342 | 0.298 |
| A | DVF | UL5 | BX | 3 | P Mean | 8.905 | 0.185 | 0.107 | 8.782 | 9.118 | |
| A | DVF | UL5 | BY | 3 | W Mean | 13.984 | 0.269 | 0.155 | 13.705 | 14.241 | 0.3227 |
| A | DVF | UL5 | BY | 3 | P Mean | 13.777 | 0.392 | 0.226 | 13.348 | 14.117 | |
| A | DVF | UL5 | C | 3 | W Mean | 9.701 | 0.077 | 0.044 | 9.617 | 9.767 | 0.464 |
| A | DVF | UL5 | C | 3 | P Mean | 9.601 | 0.129 | 0.075 | 9.480 | 9.737 | |
| A | DVF | UL5 | D | 3 | W Mean | 9.500 | 0.098 | 0.056 | 9.423 | 9.610 | 0.5444 |
| A | DVF | UL5 | D | 3 | P Mean | 9.398 | 0.198 | 0.115 | 9.280 | 9.627 | |
| A | DVF | UL6 | AX | 3 | W Mean | 3.136 | 0.483 | 0.279 | 2.610 | 3.560 | |
| A | DVF | UL6 | AX | 1 | P Mean | 2.573 | | | 2.573 | 2.573 | |
| A | DVF | UL6 | AY | 3 | W Mean | 11.694 | 0.239 | 0.138 | 11.545 | 11.970 | |
| A | DVF | UL6 | AY | 1 | P Mean | 12.077 | | | 12.077 | 12.077 | |
| A | DVF | UL6 | BX | 3 | W Mean | 5.198 | 0.471 | 0.272 | 4.679 | 5.598 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| A | DVF | UL6 | BX | 1 | P Mean | 4.676 | | | 4.676 | 4.676 | |
| A | DVF | UL6 | BY | 3 | W Mean | 11.878 | 0.160 | 0.092 | 11.752 | 12.058 | |
| A | DVF | UL6 | BY | 1 | P Mean | 12.169 | | | 12.169 | 12.169 | |
| A | DVF | UL6 | C | 3 | W Mean | 7.918 | 0.027 | 0.015 | 7.890 | 7.943 | |
| A | DVF | UL6 | C | 1 | P Mean | 7.920 | | | 7.920 | 7.920 | |
| A | DVF | UL6 | D | 3 | W Mean | 8.184 | 0.093 | 0.054 | 8.113 | 8.290 | |
| A | DVF | UL6 | D | 1 | P Mean | 8.347 | | | 8.347 | 8.347 | |
| A | DVF | UR1 | AX | 3 | W Mean | 7.202 | 0.081 | 0.047 | 7.127 | 7.288 | 0.188 |
| A | DVF | UR1 | AX | 3 | P Mean | 7.257 | 0.068 | 0.040 | 7.178 | 7.297 | |
| A | DVF | UR1 | AY | 3 | W Mean | 11.253 | 0.227 | 0.131 | 10.995 | 11.423 | 0.7449 |
| A | DVF | UR1 | AY | 3 | P Mean | 11.226 | 0.142 | 0.082 | 11.072 | 11.353 | |
| A | DVF | UR1 | BX | 3 | W Mean | 8.831 | 0.086 | 0.050 | 8.757 | 8.925 | 0.771 |
| A | DVF | UR1 | BX | 3 | P Mean | 8.844 | 0.113 | 0.065 | 8.714 | 8.917 | |
| A | DVF | UR1 | BY | 3 | W Mean | 11.262 | 0.167 | 0.096 | 11.086 | 11.418 | 0.5045 |
| A | DVF | UR1 | BY | 3 | P Mean | 11.214 | 0.098 | 0.057 | 11.103 | 11.289 | |
| A | DVF | UR1 | C | 3 | W Mean | 13.290 | 0.034 | 0.020 | 13.253 | 13.320 | 0.930 |
| A | DVF | UR1 | C | 3 | P Mean | 13.293 | 0.092 | 0.053 | 13.190 | 13.367 | |
| A | DVF | UR1 | D | 3 | W Mean | 13.607 | 0.085 | 0.049 | 13.533 | 13.700 | 0.6306 |
| A | DVF | UR1 | D | 3 | P Mean | 13.587 | 0.126 | 0.072 | 13.447 | 13.690 | |
| A | DVF | UR2 | AX | 3 | W Mean | 6.577 | 0.197 | 0.114 | 6.384 | 6.778 | 0.181 |
| A | DVF | UR2 | AX | 3 | P Mean | 6.605 | 0.207 | 0.119 | 6.390 | 6.802 | |
| A | DVF | UR2 | AY | 3 | W Mean | 13.828 | 0.160 | 0.092 | 13.672 | 13.991 | 0.4155 |
| A | DVF | UR2 | AY | 3 | P Mean | 13.973 | 0.396 | 0.229 | 13.658 | 14.418 | |
| A | DVF | UR2 | BX | 3 | W Mean | 7.584 | 0.214 | 0.124 | 7.381 | 7.808 | 0.561 |
| A | DVF | UR2 | BX | 3 | P Mean | 7.607 | 0.228 | 0.13 | 7.360 | 7.810 | |

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| A | DVF | UR2 | BY | 3 | W Mean | 13.842 | 0.201 | 0.116 | 13.637 | 14.038 | 0.3524 |
| A | DVF | UR2 | BY | 3 | P Mean | 13.999 | 0.409 | 0.236 | 13.671 | 14.457 | |
| A | DVF | UR2 | C | 3 | W Mean | 13.686 | 0.121 | 0.070 | 13.547 | 13.770 | 0.368 |
| A | DVF | UR2 | C | 3 | P Mean | 13.740 | 0.040 | 0.023 | 13.693 | 13.763 | |
| A | DVF | UR2 | D | 3 | W Mean | 13.719 | 0.052 | 0.030 | 13.660 | 13.760 | 0.4619 |
| A | DVF | UR2 | D | 3 | P Mean | 13.693 | 0.054 | 0.031 | 13.647 | 13.753 | |
| A | DVF | UR3 | AX | 3 | W Mean | 8.816 | 0.226 | 0.130 | 8.580 | 9.030 | 0.467 |
| A | DVF | UR3 | AX | 3 | P Mean | 8.845 | 0.178 | 0.103 | 8.673 | 9.029 | |
| A | DVF | UR3 | AY | 3 | W Mean | 11.876 | 0.229 | 0.132 | 11.626 | 12.077 | 0.6056 |
| A | DVF | UR3 | AY | 3 | P Mean | 11.807 | 0.364 | 0.210 | 11.392 | 12.073 | |
| A | DVF | UR3 | BX | 3 | W Mean | 10.190 | 0.227 | 0.131 | 9.950 | 10.401 | 0.814 |
| A | DVF | UR3 | BX | 3 | P Mean | 10.204 | 0.190 | 0.110 | 10.053 | 10.418 | |
| A | DVF | UR3 | BY | 3 | W Mean | 11.958 | 0.120 | 0.069 | 11.828 | 12.063 | 0.6334 |
| A | DVF | UR3 | BY | 3 | P Mean | 11.885 | 0.303 | 0.175 | 11.560 | 12.160 | |
| A | DVF | UR3 | C | 3 | W Mean | 11.702 | 0.090 | 0.052 | 11.603 | 11.777 | 0.061 |
| A | DVF | UR3 | C | 3 | P Mean | 11.882 | 0.017 | 0.010 | 11.867 | 11.900 | |
| A | DVF | UR3 | D | 3 | W Mean | 12.002 | 0.051 | 0.029 | 11.957 | 12.057 | 0.1568 |
| A | DVF | UR3 | D | 3 | P Mean | 12.097 | 0.067 | 0.038 | 12.020 | 12.140 | |
| A | DVF | UR4 | AX | 3 | W Mean | 8.855 | 0.249 | 0.144 | 8.621 | 9.117 | 0.590 |
| A | DVF | UR4 | AX | 3 | P Mean | 8.824 | 0.271 | 0.156 | 8.638 | 9.135 | |
| A | DVF | UR4 | AY | 3 | W Mean | 13.418 | 0.135 | 0.078 | 13.308 | 13.568 | 0.5322 |
| A | DVF | UR4 | AY | 3 | P Mean | 13.351 | 0.054 | 0.031 | 13.296 | 13.403 | |
| A | DVF | UR4 | BX | 3 | W Mean | 10.134 | 0.185 | 0.107 | 9.939 | 10.308 | 0.589 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| A | DVF | UR4 | BX | 3 | P Mean | 10.100 | 0.219 | 0.126 | 9.935 | 10.348 | |
| A | DVF | UR4 | BY | 3 | W Mean | 13.432 | 0.145 | 0.084 | 13.333 | 13.599 | 0.5312 |
| A | DVF | UR4 | BY | 3 | P Mean | 13.367 | 0.069 | 0.040 | 13.290 | 13.422 | |
| A | DVF | UR4 | C | 3 | W Mean | 9.591 | 0.105 | 0.060 | 9.513 | 9.710 | 0.514 |
| A | DVF | UR4 | C | 3 | P Mean | 9.629 | 0.051 | 0.029 | 9.573 | 9.673 | |
| A | DVF | UR4 | D | 3 | W Mean | 9.350 | 0.087 | 0.050 | 9.300 | 9.450 | 0.1595 |
| A | DVF | UR4 | D | 3 | P Mean | 9.383 | 0.060 | 0.035 | 9.347 | 9.453 | |
| A | DVF | UR5 | AX | 3 | W Mean | 8.022 | 0.121 | 0.070 | 7.920 | 8.156 | 0.815 |
| A | DVF | UR5 | AX | 3 | P Mean | 8.040 | 0.203 | 0.117 | 7.875 | 8.266 | |
| A | DVF | UR5 | AY | 3 | W Mean | 12.226 | 0.109 | 0.063 | 12.137 | 12.347 | 0.1192 |
| A | DVF | UR5 | AY | 3 | P Mean | 12.041 | 0.150 | 0.087 | 11.880 | 12.178 | |
| A | DVF | UR5 | BX | 3 | W Mean | 9.328 | 0.088 | 0.051 | 9.232 | 9.404 | 0.750 |
| A | DVF | UR5 | BX | 3 | P Mean | 9.300 | 0.171 | 0.099 | 9.178 | 9.496 | |
| A | DVF | UR5 | BY | 3 | W Mean | 12.256 | 0.088 | 0.051 | 12.176 | 12.351 | 0.105 |
| A | DVF | UR5 | BY | 3 | P Mean | 12.048 | 0.133 | 0.077 | 11.900 | 12.156 | |
| A | DVF | UR5 | C | 3 | W Mean | 9.518 | 0.046 | 0.027 | 9.467 | 9.557 | 0.850 |
| A | DVF | UR5 | C | 3 | P Mean | 9.509 | 0.075 | 0.043 | 9.437 | 9.587 | |
| A | DVF | UR5 | D | 3 | W Mean | 9.552 | 0.047 | 0.027 | 9.510 | 9.603 | 0.4151 |
| A | DVF | UR5 | D | 3 | P Mean | 9.504 | 0.087 | 0.050 | 9.407 | 9.573 | |
| A | DVF | UR6 | AX | 3 | W Mean | 7.607 | 0.185 | 0.107 | 7.397 | 7.745 | 0.697 |
| A | DVF | UR6 | AX | 2 | P Mean | 7.495 | 0.082 | 0.058 | 7.437 | 7.553 | |
| A | DVF | UR6 | AY | 3 | W Mean | 10.804 | 0.251 | 0.145 | 10.584 | 11.077 | 0.1586 |
| A | DVF | UR6 | AY | 2 | P Mean | 10.577 | 0.108 | 0.077 | 10.500 | 10.653 | |
| A | DVF | UR6 | BX | 3 | W Mean | 9.721 | 0.201 | 0.11 | 9.489 | 9.841 | 0.873 |

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| | | | | | | | | 6 | | | |
| A | DVF | UR6 | BX | 2 | P Mean | 9.689 | 0.054 | 0.039 | 9.650 | 9.727 | |
| A | DVF | UR6 | BY | 3 | W Mean | 10.723 | 0.198 | 0.114 | 10.596 | 10.951 | 0.0965 |
| A | DVF | UR6 | BY | 2 | P Mean | 10.499 | 0.192 | 0.136 | 10.363 | 10.634 | |
| A | DVF | UR6 | C | 3 | W Mean | 6.950 | 0.024 | 0.014 | 6.933 | 6.977 | 0.394 |
| A | DVF | UR6 | C | 2 | P Mean | 6.879 | 0.054 | 0.039 | 6.840 | 6.917 | |
| A | DVF | UR6 | D | 3 | W Mean | 7.651 | 0.017 | 0.010 | 7.640 | 7.670 | 0.6428 |
| A | DVF | UR6 | D | 2 | P Mean | 7.633 | 0.028 | 0.020 | 7.613 | 7.653 | |
| A | PVSP | UL1 | AX | 3 | W Mean | 7.771 | 0.271 | 0.156 | 7.529 | 8.063 | 0.627 |
| A | PVSP | UL1 | AX | 3 | P Mean | 7.750 | 0.318 | 0.184 | 7.436 | 8.072 | |
| A | PVSP | UL1 | AY | 3 | W Mean | 10.664 | 0.288 | 0.166 | 10.364 | 10.939 | 0.5456 |
| A | PVSP | UL1 | AY | 3 | P Mean | 10.416 | 0.450 | 0.260 | 10.020 | 10.906 | |
| A | PVSP | UL1 | BX | 3 | W Mean | 9.355 | 0.309 | 0.178 | 9.090 | 9.694 | 0.082 |
| A | PVSP | UL1 | BX | 3 | P Mean | 9.308 | 0.331 | 0.191 | 9.016 | 9.668 | |
| A | PVSP | UL1 | BY | 3 | W Mean | 10.683 | 0.289 | 0.167 | 10.367 | 10.933 | 0.5549 |
| A | PVSP | UL1 | BY | 3 | P Mean | 10.447 | 0.472 | 0.273 | 10.043 | 10.966 | |
| A | PVSP | UL1 | C | 3 | W Mean | 13.088 | 0.125 | 0.072 | 12.960 | 13.210 | 0.267 |
| A | PVSP | UL1 | C | 3 | P Mean | 13.029 | 0.109 | 0.063 | 12.903 | 13.100 | |
| A | PVSP | UL1 | D | 3 | W Mean | 13.200 | 0.085 | 0.049 | 13.140 | 13.297 | 0.2601 |
| A | PVSP | UL1 | D | 3 | P Mean | 13.013 | 0.125 | 0.072 | 12.880 | 13.127 | |
| A | PVSP | UL2 | AX | 3 | W Mean | 8.423 | 0.269 | 0.155 | 8.128 | 8.653 | 0.594 |
| A | PVSP | UL2 | AX | 3 | P Mean | 8.402 | 0.324 | 0.187 | 8.038 | 8.658 | |
| A | PVSP | UL2 | AY | 3 | W Mean | 11.071 | 0.101 | 0.058 | 10.984 | 11.182 | 0.9415 |
| A | PVSP | UL2 | AY | 3 | P Mean | 11.085 | 0.355 | 0.205 | 10.675 | 11.298 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| A | PVSP | UL2 | BX | 3 | W Mean | 9.488 | 0.273 | 0.158 | 9.187 | 9.719 | 0.0467 * |
| A | PVSP | UL2 | BX | 3 | P Mean | 9.390 | 0.274 | 0.158 | 9.078 | 9.589 | |
| A | PVSP | UL2 | BY | 3 | W Mean | 11.028 | 0.124 | 0.072 | 10.940 | 11.170 | 0.891 |
| A | PVSP | UL2 | BY | 3 | P Mean | 11.056 | 0.340 | 0.197 | 10.664 | 11.281 | |
| A | PVSP | UL2 | C | 3 | W Mean | 13.805 | 0.071 | 0.041 | 13.723 | 13.850 | 0.175 |
| A | PVSP | UL2 | C | 3 | P Mean | 13.694 | 0.092 | 0.053 | 13.633 | 13.800 | |
| A | PVSP | UL2 | D | 3 | W Mean | 13.646 | 0.065 | 0.037 | 13.573 | 13.697 | 0.1909 |
| A | PVSP | UL2 | D | 3 | P Mean | 13.468 | 0.125 | 0.072 | 13.337 | 13.587 | |
| A | PVSP | UL3 | AX | 3 | W Mean | 4.826 | 0.273 | 0.158 | 4.512 | 5.011 | 0.592 |
| A | PVSP | UL3 | AX | 3 | P Mean | 4.806 | 0.219 | 0.126 | 4.553 | 4.943 | |
| A | PVSP | UL3 | AY | 3 | W Mean | 11.073 | 0.451 | 0.261 | 10.802 | 11.594 | 0.143 |
| A | PVSP | UL3 | AY | 3 | P Mean | 11.507 | 0.770 | 0.445 | 11.019 | 12.395 | |
| A | PVSP | UL3 | BX | 3 | W Mean | 6.239 | 0.360 | 0.208 | 5.835 | 6.527 | 0.337 |
| A | PVSP | UL3 | BX | 3 | P Mean | 6.155 | 0.245 | 0.142 | 5.876 | 6.338 | |
| A | PVSP | UL3 | BY | 3 | W Mean | 11.072 | 0.452 | 0.261 | 10.802 | 11.594 | 0.0836 |
| A | PVSP | UL3 | BY | 3 | P Mean | 11.407 | 0.630 | 0.364 | 11.010 | 12.134 | |
| A | PVSP | UL3 | C | 3 | W Mean | 11.601 | 0.039 | 0.022 | 11.560 | 11.637 | 0.169 |
| A | PVSP | UL3 | C | 3 | P Mean | 11.415 | 0.189 | 0.109 | 11.197 | 11.527 | |
| A | PVSP | UL3 | D | 3 | W Mean | 11.816 | 0.017 | 0.010 | 11.797 | 11.830 | 0.0747 |
| A | PVSP | UL3 | D | 3 | P Mean | 11.629 | 0.092 | 0.053 | 11.557 | 11.733 | |
| A | PVSP | UL4 | AX | 3 | W Mean | 8.272 | 0.186 | 0.107 | 8.058 | 8.394 | 0.877 |
| A | PVSP | UL4 | AX | 3 | P Mean | 8.267 | 0.207 | 0.119 | 8.030 | 8.408 | |
| A | PVSP | UL4 | AY | 3 | W Mean | 11.426 | 0.130 | 0.075 | 11.297 | 11.557 | 0.45 |
| A | PVSP | UL4 | AY | 3 | P Mean | 11.31 | 0.333 | 0.19 | 10.98 | 11.64 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 7 | | 2 | 0 | 5 | |
| A | PVSP | UL4 | BX | 3 | W Mean | 9.571 | 0.231 | 0.133 | 9.309 | 9.743 | 0.073 |
| A | PVSP | UL4 | BX | 3 | P Mean | 9.523 | 0.216 | 0.125 | 9.275 | 9.668 | |
| A | PVSP | UL4 | BY | 3 | W Mean | 11.387 | 0.083 | 0.048 | 11.318 | 11.479 | 0.4849 |
| A | PVSP | UL4 | BY | 3 | P Mean | 11.288 | 0.283 | 0.163 | 11.022 | 11.585 | |
| A | PVSP | UL4 | C | 3 | W Mean | 10.247 | 0.012 | 0.007 | 10.237 | 10.260 | 0.0177 * |
| A | PVSP | UL4 | C | 3 | P Mean | 10.160 | 0.009 | 0.005 | 10.150 | 10.167 | |
| A | PVSP | UL4 | D | 3 | W Mean | 10.193 | 0.075 | 0.044 | 10.123 | 10.273 | 0.0457 |
| A | PVSP | UL4 | D | 3 | P Mean | 10.082 | 0.043 | 0.025 | 10.033 | 10.113 | |
| A | PVSP | UL5 | AX | 3 | W Mean | 7.803 | 0.452 | 0.261 | 7.282 | 8.092 | 0.455 |
| A | PVSP | UL5 | AX | 3 | P Mean | 7.776 | 0.444 | 0.256 | 7.264 | 8.055 | |
| A | PVSP | UL5 | AY | 3 | W Mean | 14.142 | 0.177 | 0.102 | 13.952 | 14.302 | 0.4968 |
| A | PVSP | UL5 | AY | 3 | P Mean | 14.025 | 0.124 | 0.071 | 13.905 | 14.152 | |
| A | PVSP | UL5 | BX | 3 | W Mean | 9.054 | 0.548 | 0.316 | 8.423 | 9.410 | 0.503 |
| A | PVSP | UL5 | BX | 3 | P Mean | 8.998 | 0.498 | 0.288 | 8.428 | 9.350 | |
| A | PVSP | UL5 | BY | 3 | W Mean | 14.005 | 0.127 | 0.073 | 13.864 | 14.111 | 0.4968 |
| A | PVSP | UL5 | BY | 3 | P Mean | 13.909 | 0.175 | 0.101 | 13.722 | 14.068 | |
| A | PVSP | UL5 | C | 3 | W Mean | 9.750 | 0.090 | 0.052 | 9.670 | 9.847 | 0.151 |
| A | PVSP | UL5 | C | 3 | P Mean | 9.682 | 0.052 | 0.030 | 9.623 | 9.720 | |
| A | PVSP | UL5 | D | 3 | W Mean | 9.556 | 0.099 | 0.057 | 9.490 | 9.670 | 0.0551 |
| A | PVSP | UL5 | D | 3 | P Mean | 9.488 | 0.073 | 0.042 | 9.430 | 9.570 | |
| A | PVSP | UL6 | AX | 3 | W Mean | 3.031 | 0.407 | 0.235 | 2.567 | 3.327 | 0.858 |
| A | PVSP | UL6 | AX | 3 | P Mean | 3.024 | 0.348 | 0.201 | 2.626 | 3.269 | |
| A | PVSP | UL6 | AY | 3 | W Mean | 11.539 | 0.314 | 0.181 | 11.278 | 11.888 | 0.4562 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| A | PVSP | UL6 | AY | 3 | P Mean | 11.561 | 0.275 | 0.159 | 11.323 | 11.862 | |
| A | PVSP | UL6 | BX | 3 | W Mean | 4.904 | 0.334 | 0.193 | 4.701 | 5.290 | 0.373 |
| A | PVSP | UL6 | BX | 3 | P Mean | 5.157 | 0.360 | 0.208 | 4.743 | 5.398 | |
| A | PVSP | UL6 | BY | 3 | W Mean | 11.729 | 0.239 | 0.138 | 11.564 | 12.003 | 0.5005 |
| A | PVSP | UL6 | BY | 3 | P Mean | 11.778 | 0.141 | 0.081 | 11.688 | 11.940 | |
| A | PVSP | UL6 | C | 3 | W Mean | 7.897 | 0.093 | 0.054 | 7.830 | 8.003 | 0.174 |
| A | PVSP | UL6 | C | 3 | P Mean | 7.825 | 0.067 | 0.038 | 7.757 | 7.890 | |
| A | PVSP | UL6 | D | 3 | W Mean | 8.228 | 0.146 | 0.085 | 8.063 | 8.343 | 0.7199 |
| A | PVSP | UL6 | D | 3 | P Mean | 8.207 | 0.064 | 0.037 | 8.133 | 8.250 | |
| A | PVSP | UR1 | AX | 3 | W Mean | 7.104 | 0.380 | 0.219 | 6.817 | 7.535 | 0.236 |
| A | PVSP | UR1 | AX | 3 | P Mean | 7.428 | 0.223 | 0.129 | 7.174 | 7.592 | |
| A | PVSP | UR1 | AY | 3 | W Mean | 11.588 | 0.438 | 0.253 | 11.277 | 12.089 | 0.9494 |
| A | PVSP | UR1 | AY | 3 | P Mean | 11.631 | 0.645 | 0.372 | 11.043 | 12.321 | |
| A | PVSP | UR1 | BX | 3 | W Mean | 8.699 | 0.418 | 0.242 | 8.346 | 9.161 | 0.330 |
| A | PVSP | UR1 | BX | 3 | P Mean | 9.053 | 0.223 | 0.129 | 8.805 | 9.235 | |
| A | PVSP | UR1 | BY | 3 | W Mean | 11.551 | 0.419 | 0.242 | 11.256 | 12.030 | 0.9493 |
| A | PVSP | UR1 | BY | 3 | P Mean | 11.594 | 0.669 | 0.386 | 10.982 | 12.308 | |
| A | PVSP | UR1 | C | 3 | W Mean | 13.209 | 0.047 | 0.027 | 13.177 | 13.263 | 0.940 |
| A | PVSP | UR1 | C | 3 | P Mean | 13.212 | 0.099 | 0.057 | 13.103 | 13.297 | |
| A | PVSP | UR1 | D | 3 | W Mean | 13.640 | 0.020 | 0.012 | 13.620 | 13.660 | 0.2046 |
| A | PVSP | UR1 | D | 3 | P Mean | 13.549 | 0.068 | 0.039 | 13.503 | 13.627 | |
| A | PVSP | UR2 | AX | 3 | W Mean | 6.677 | 0.143 | 0.082 | 6.531 | 6.816 | 0.200 |
| A | PVSP | UR2 | AX | 3 | P Mean | 6.746 | 0.093 | 0.054 | 6.640 | 6.812 | |
| A | PVSP | UR2 | AY | 3 | W Mean | 14.03 | 0.199 | 0.11 | 13.89 | 14.26 | 0.2339 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 5 | | 5 | 3 | 3 | |
| A | PVSP | UR2 | AY | 3 | P Mean | 13.760 | 0.092 | 0.053 | 13.677 | 13.859 | |
| A | PVSP | UR2 | BX | 3 | W Mean | 7.713 | 0.141 | 0.082 | 7.550 | 7.802 | 0.416 |
| A | PVSP | UR2 | BX | 3 | P Mean | 7.729 | 0.114 | 0.066 | 7.597 | 7.798 | |
| A | PVSP | UR2 | BY | 3 | W Mean | 13.964 | 0.172 | 0.099 | 13.822 | 14.155 | 0.2523 |
| A | PVSP | UR2 | BY | 3 | P Mean | 13.719 | 0.098 | 0.057 | 13.627 | 13.822 | |
| A | PVSP | UR2 | C | 3 | W Mean | 13.691 | 0.051 | 0.030 | 13.633 | 13.730 | 0.439 |
| A | PVSP | UR2 | C | 3 | P Mean | 13.636 | 0.127 | 0.073 | 13.517 | 13.770 | |
| A | PVSP | UR2 | D | 3 | W Mean | 13.657 | 0.145 | 0.084 | 13.507 | 13.797 | 0.242 |
| A | PVSP | UR2 | D | 3 | P Mean | 13.538 | 0.134 | 0.077 | 13.400 | 13.667 | |
| A | PVSP | UR3 | AX | 3 | W Mean | 8.718 | 0.083 | 0.048 | 8.667 | 8.814 | 0.079 |
| A | PVSP | UR3 | AX | 3 | P Mean | 8.806 | 0.102 | 0.059 | 8.710 | 8.914 | |
| A | PVSP | UR3 | AY | 3 | W Mean | 12.046 | 0.443 | 0.256 | 11.640 | 12.518 | 0.2616 |
| A | PVSP | UR3 | AY | 3 | P Mean | 11.771 | 0.150 | 0.087 | 11.604 | 11.896 | |
| A | PVSP | UR3 | BX | 3 | W Mean | 10.093 | 0.116 | 0.067 | 9.998 | 10.222 | 0.137 |
| A | PVSP | UR3 | BX | 3 | P Mean | 10.167 | 0.141 | 0.081 | 10.018 | 10.298 | |
| A | PVSP | UR3 | BY | 3 | W Mean | 12.001 | 0.450 | 0.260 | 11.584 | 12.478 | 0.2686 |
| A | PVSP | UR3 | BY | 3 | P Mean | 11.713 | 0.134 | 0.077 | 11.564 | 11.823 | |
| A | PVSP | UR3 | C | 3 | W Mean | 11.721 | 0.068 | 0.039 | 11.647 | 11.780 | 0.184 |
| A | PVSP | UR3 | C | 3 | P Mean | 11.632 | 0.128 | 0.074 | 11.487 | 11.730 | |
| A | PVSP | UR3 | D | 3 | W Mean | 12.038 | 0.145 | 0.084 | 11.883 | 12.170 | 0.0623 |
| A | PVSP | UR3 | D | 3 | P Mean | 11.907 | 0.171 | 0.098 | 11.710 | 12.013 | |
| A | PVSP | UR4 | AX | 3 | W Mean | 8.769 | 0.325 | 0.188 | 8.503 | 9.131 | 0.0294 * |
| A | PVSP | UR4 | AX | 3 | P Mean | 8.921 | 0.352 | 0.203 | 8.666 | 9.322 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| A | PVSP | UR4 | AY | 3 | W Mean | 13.451 | 0.323 | 0.187 | 13.091 | 13.715 | 0.5918 |
| A | PVSP | UR4 | AY | 3 | P Mean | 13.328 | 0.266 | 0.153 | 13.078 | 13.607 | |
| A | PVSP | UR4 | BX | 3 | W Mean | 10.051 | 0.284 | 0.164 | 9.882 | 10.379 | 0.0199 * |
| A | PVSP | UR4 | BX | 3 | P Mean | 10.170 | 0.314 | 0.181 | 9.986 | 10.532 | |
| A | PVSP | UR4 | BY | 3 | W Mean | 13.398 | 0.375 | 0.217 | 12.968 | 13.659 | 0.5917 |
| A | PVSP | UR4 | BY | 3 | P Mean | 13.265 | 0.256 | 0.148 | 13.057 | 13.551 | |
| A | PVSP | UR4 | C | 3 | W Mean | 9.586 | 0.132 | 0.076 | 9.470 | 9.730 | 0.292 |
| A | PVSP | UR4 | C | 3 | P Mean | 9.441 | 0.178 | 0.103 | 9.257 | 9.613 | |
| A | PVSP | UR4 | D | 3 | W Mean | 9.332 | 0.175 | 0.101 | 9.157 | 9.507 | 0.23 |
| A | PVSP | UR4 | D | 3 | P Mean | 9.174 | 0.242 | 0.140 | 8.900 | 9.360 | |
| A | PVSP | UR5 | AX | 3 | W Mean | 8.108 | 0.142 | 0.082 | 7.959 | 8.242 | 0.082 |
| A | PVSP | UR5 | AX | 3 | P Mean | 8.304 | 0.237 | 0.137 | 8.036 | 8.487 | |
| A | PVSP | UR5 | AY | 3 | W Mean | 12.091 | 0.132 | 0.076 | 11.940 | 12.181 | 0.3918 |
| A | PVSP | UR5 | AY | 3 | P Mean | 11.991 | 0.075 | 0.043 | 11.908 | 12.053 | |
| A | PVSP | UR5 | BX | 3 | W Mean | 9.350 | 0.186 | 0.108 | 9.154 | 9.525 | 0.067 |
| A | PVSP | UR5 | BX | 3 | P Mean | 9.525 | 0.264 | 0.153 | 9.234 | 9.750 | |
| A | PVSP | UR5 | BY | 3 | W Mean | 12.116 | 0.142 | 0.082 | 11.955 | 12.223 | 0.2892 |
| A | PVSP | UR5 | BY | 3 | P Mean | 11.989 | 0.113 | 0.065 | 11.883 | 12.107 | |
| A | PVSP | UR5 | C | 3 | W Mean | 9.529 | 0.105 | 0.061 | 9.423 | 9.633 | 0.123 |
| A | PVSP | UR5 | C | 3 | P Mean | 9.427 | 0.127 | 0.073 | 9.280 | 9.507 | |
| A | PVSP | UR5 | D | 3 | W Mean | 9.544 | 0.157 | 0.090 | 9.373 | 9.680 | 0.0622 |
| A | PVSP | UR5 | D | 3 | P Mean | 9.421 | 0.186 | 0.107 | 9.207 | 9.537 | |
| A | PVSP | UR6 | AX | 3 | W Mean | 7.826 | 0.177 | 0.102 | 7.661 | 8.013 | 0.128 |
| A | PVSP | UR6 | AX | 3 | P Mean | 7.964 | 0.083 | 0.04 | 7.892 | 8.055 | |

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| | | | | | | | | 8 | | | |
| A | PVSP | UR6 | AY | 3 | W Mean | 10.587 | 0.455 | 0.263 | 10.106 | 11.011 | 0.1329 |
| A | PVSP | UR6 | AY | 3 | P Mean | 10.678 | 0.519 | 0.300 | 10.130 | 11.163 | |
| A | PVSP | UR6 | BX | 3 | W Mean | 9.903 | 0.256 | 0.148 | 9.662 | 10.172 | 0.135 |
| A | PVSP | UR6 | BX | 3 | P Mean | 10.138 | 0.096 | 0.055 | 10.033 | 10.221 | |
| A | PVSP | UR6 | BY | 3 | W Mean | 10.603 | 0.377 | 0.218 | 10.238 | 10.991 | 0.1532 |
| A | PVSP | UR6 | BY | 3 | P Mean | 10.673 | 0.431 | 0.249 | 10.256 | 11.116 | |
| A | PVSP | UR6 | C | 3 | W Mean | 6.994 | 0.040 | 0.023 | 6.970 | 7.040 | 0.059 |
| A | PVSP | UR6 | C | 3 | P Mean | 6.863 | 0.078 | 0.045 | 6.777 | 6.930 | |
| A | PVSP | UR6 | D | 3 | W Mean | 7.716 | 0.045 | 0.026 | 7.683 | 7.767 | 0.0693 |
| A | PVSP | UR6 | D | 3 | P Mean | 7.574 | 0.043 | 0.025 | 7.543 | 7.623 | |
| B | DPVS | UL1 | AX | 3 | W Mean | 6.801 | 0.262 | 0.151 | 6.527 | 7.049 | 0.395 |
| B | DPVS | UL1 | AX | 3 | P Mean | 6.705 | 0.139 | 0.080 | 6.545 | 6.793 | |
| B | DPVS | UL1 | AY | 3 | W Mean | 10.114 | 0.342 | 0.198 | 9.811 | 10.485 | 0.2404 |
| B | DPVS | UL1 | AY | 3 | P Mean | 9.838 | 0.131 | 0.076 | 9.692 | 9.946 | |
| B | DPVS | UL1 | BX | 3 | W Mean | 8.348 | 0.274 | 0.158 | 8.063 | 8.609 | 0.372 |
| B | DPVS | UL1 | BX | 3 | P Mean | 8.243 | 0.154 | 0.089 | 8.066 | 8.342 | |
| B | DPVS | UL1 | BY | 3 | W Mean | 10.103 | 0.335 | 0.193 | 9.794 | 10.459 | 0.2253 |
| B | DPVS | UL1 | BY | 3 | P Mean | 9.841 | 0.131 | 0.076 | 9.691 | 9.937 | |
| B | DPVS | UL1 | C | 3 | W Mean | 13.261 | 0.067 | 0.039 | 13.193 | 13.327 | 0.086 |
| B | DPVS | UL1 | C | 3 | P Mean | 13.184 | 0.029 | 0.017 | 13.163 | 13.217 | |
| B | DPVS | UL1 | D | 3 | W Mean | 13.532 | 0.082 | 0.047 | 13.480 | 13.627 | 0.0111 |
| B | DPVS | UL1 | D | 3 | P Mean | 13.391 | 0.057 | 0.033 | 13.357 | 13.457 | |
| B | DPVS | UL2 | AX | 3 | W Mean | 6.595 | 0.309 | 0.179 | 6.245 | 6.833 | 0.410 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| B | DPVS | UL2 | AX | 3 | P Mean | 6.466 | 0.250 | 0.145 | 6.303 | 6.754 | |
| B | DPVS | UL2 | AY | 3 | W Mean | 13.005 | 0.292 | 0.169 | 12.765 | 13.330 | 0.2799 |
| B | DPVS | UL2 | AY | 3 | P Mean | 12.784 | 0.217 | 0.125 | 12.542 | 12.960 | |
| B | DPVS | UL2 | BX | 3 | W Mean | 7.556 | 0.335 | 0.193 | 7.193 | 7.853 | 0.424 |
| B | DPVS | UL2 | BX | 3 | P Mean | 7.428 | 0.297 | 0.171 | 7.253 | 7.771 | |
| B | DPVS | UL2 | BY | 3 | W Mean | 13.009 | 0.300 | 0.173 | 12.761 | 13.343 | 0.2942 |
| B | DPVS | UL2 | BY | 3 | P Mean | 12.801 | 0.222 | 0.128 | 12.550 | 12.973 | |
| B | DPVS | UL2 | C | 3 | W Mean | 13.778 | 0.114 | 0.066 | 13.690 | 13.907 | 0.198 |
| B | DPVS | UL2 | C | 3 | P Mean | 13.698 | 0.041 | 0.024 | 13.663 | 13.743 | |
| B | DPVS | UL2 | D | 3 | W Mean | 13.534 | 0.017 | 0.010 | 13.520 | 13.553 | 0.0537 |
| B | DPVS | UL2 | D | 3 | P Mean | 13.424 | 0.037 | 0.021 | 13.390 | 13.463 | |
| B | DPVS | UL3 | AX | 3 | W Mean | 6.230 | 0.173 | 0.100 | 6.100 | 6.426 | 0.121 |
| B | DPVS | UL3 | AX | 3 | P Mean | 6.088 | 0.096 | 0.055 | 6.012 | 6.196 | |
| B | DPVS | UL3 | AY | 3 | W Mean | 12.025 | 0.262 | 0.151 | 11.785 | 12.304 | 0.6626 |
| B | DPVS | UL3 | AY | 3 | P Mean | 12.121 | 0.141 | 0.082 | 11.969 | 12.249 | |
| B | DPVS | UL3 | BX | 3 | W Mean | 7.527 | 0.187 | 0.108 | 7.415 | 7.743 | 0.202 |
| B | DPVS | UL3 | BX | 3 | P Mean | 7.366 | 0.087 | 0.050 | 7.267 | 7.431 | |
| B | DPVS | UL3 | BY | 3 | W Mean | 12.100 | 0.235 | 0.136 | 11.886 | 12.352 | 0.6626 |
| B | DPVS | UL3 | BY | 3 | P Mean | 12.196 | 0.160 | 0.092 | 12.035 | 12.354 | |
| B | DPVS | UL3 | C | 3 | W Mean | 11.766 | 0.086 | 0.049 | 11.667 | 11.820 | 0.894 |
| B | DPVS | UL3 | C | 3 | P Mean | 11.782 | 0.118 | 0.068 | 11.657 | 11.890 | |
| B | DPVS | UL3 | D | 3 | W Mean | 11.954 | 0.075 | 0.043 | 11.867 | 11.997 | 0.687 |
| B | DPVS | UL3 | D | 3 | P Mean | 11.913 | 0.085 | 0.049 | 11.820 | 11.987 | |
| B | DPVS | UL4 | AX | 3 | W Mean | 1.756 | 0.249 | 0.14 | 1.468 | 1.907 | 0.063 |

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| | | | | | | | | 4 | | | |
| B | DPVS | UL4 | AX | 3 | P Mean | 1.640 | 0.199 | 0.115 | 1.411 | 1.762 | |
| B | DPVS | UL4 | AY | 3 | W Mean | 15.975 | 0.091 | 0.053 | 15.880 | 16.062 | 0.6309 |
| B | DPVS | UL4 | AY | 3 | P Mean | 15.917 | 0.236 | 0.136 | 15.654 | 16.112 | |
| B | DPVS | UL4 | BX | 3 | W Mean | 2.983 | 0.280 | 0.162 | 2.660 | 3.150 | 0.145 |
| B | DPVS | UL4 | BX | 3 | P Mean | 2.863 | 0.209 | 0.120 | 2.627 | 3.023 | |
| B | DPVS | UL4 | BY | 3 | W Mean | 15.933 | 0.084 | 0.049 | 15.836 | 15.987 | 0.6231 |
| B | DPVS | UL4 | BY | 3 | P Mean | 15.875 | 0.243 | 0.140 | 15.624 | 16.109 | |
| B | DPVS | UL4 | C | 3 | W Mean | 9.687 | 0.138 | 0.080 | 9.527 | 9.770 | 0.499 |
| B | DPVS | UL4 | C | 3 | P Mean | 9.626 | 0.134 | 0.077 | 9.537 | 9.780 | |
| B | DPVS | UL4 | D | 3 | W Mean | 9.623 | 0.115 | 0.067 | 9.503 | 9.733 | 0.2989 |
| B | DPVS | UL4 | D | 3 | P Mean | 9.560 | 0.170 | 0.098 | 9.430 | 9.753 | |
| B | DPVS | UL5 | AX | 3 | W Mean | 8.567 | 0.137 | 0.079 | 8.471 | 8.724 | 0.0475* |
| B | DPVS | UL5 | AX | 3 | P Mean | 8.415 | 0.102 | 0.059 | 8.313 | 8.517 | |
| B | DPVS | UL5 | AY | 3 | W Mean | 10.495 | 0.315 | 0.182 | 10.164 | 10.790 | 0.4089 |
| B | DPVS | UL5 | AY | 3 | P Mean | 10.368 | 0.185 | 0.107 | 10.246 | 10.581 | |
| B | DPVS | UL5 | BX | 3 | W Mean | 9.810 | 0.108 | 0.062 | 9.737 | 9.934 | 0.023* |
| B | DPVS | UL5 | BX | 3 | P Mean | 9.634 | 0.071 | 0.041 | 9.578 | 9.713 | |
| B | DPVS | UL5 | BY | 3 | W Mean | 10.436 | 0.348 | 0.201 | 10.061 | 10.749 | 0.4087 |
| B | DPVS | UL5 | BY | 3 | P Mean | 10.310 | 0.197 | 0.114 | 10.175 | 10.536 | |
| B | DPVS | UL5 | C | 3 | W Mean | 9.049 | 0.037 | 0.022 | 9.017 | 9.090 | 0.816 |
| B | DPVS | UL5 | C | 3 | P Mean | 9.063 | 0.081 | 0.047 | 9.010 | 9.157 | |
| B | DPVS | UL5 | D | 3 | W Mean | 8.915 | 0.091 | 0.053 | 8.817 | 8.997 | 0.2521 |
| B | DPVS | UL5 | D | 3 | P Mean | 8.869 | 0.068 | 0.039 | 8.823 | 8.947 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| B | DPVS | UL6 | AX | 3 | W Mean | 6.762 | 0.071 | 0.041 | 6.684 | 6.822 | 0.126 |
| B | DPVS | UL6 | AX | 3 | P Mean | 6.621 | 0.098 | 0.056 | 6.549 | 6.732 | |
| B | DPVS | UL6 | AY | 3 | W Mean | 9.996 | 0.368 | 0.212 | 9.662 | 10.390 | 0.6033 |
| B | DPVS | UL6 | AY | 3 | P Mean | 10.158 | 0.265 | 0.153 | 9.975 | 10.461 | |
| B | DPVS | UL6 | BX | 3 | W Mean | 8.836 | 0.081 | 0.047 | 8.742 | 8.885 | 0.165 |
| B | DPVS | UL6 | BX | 3 | P Mean | 8.768 | 0.108 | 0.062 | 8.658 | 8.874 | |
| B | DPVS | UL6 | BY | 3 | W Mean | 10.057 | 0.200 | 0.116 | 9.862 | 10.262 | 0.6863 |
| B | DPVS | UL6 | BY | 3 | P Mean | 10.174 | 0.338 | 0.195 | 9.913 | 10.556 | |
| B | DPVS | UL6 | C | 3 | W Mean | 7.992 | 0.169 | 0.098 | 7.837 | 8.173 | 0.072 |
| B | DPVS | UL6 | C | 3 | P Mean | 7.820 | 0.157 | 0.091 | 7.710 | 8.000 | |
| B | DPVS | UL6 | D | 3 | W Mean | 8.049 | 0.150 | 0.086 | 7.943 | 8.220 | 0.2546 |
| B | DPVS | UL6 | D | 3 | P Mean | 7.840 | 0.079 | 0.046 | 7.750 | 7.897 | |
| B | DPVS | UR1 | AX | 3 | W Mean | 4.315 | 0.157 | 0.090 | 4.151 | 4.463 | 0.595 |
| B | DPVS | UR1 | AX | 3 | P Mean | 4.331 | 0.197 | 0.114 | 4.116 | 4.503 | |
| B | DPVS | UR1 | AY | 3 | W Mean | 13.548 | 0.727 | 0.420 | 12.852 | 14.303 | 0.4113 |
| B | DPVS | UR1 | AY | 3 | P Mean | 13.125 | 0.097 | 0.056 | 13.042 | 13.232 | |
| B | DPVS | UR1 | BX | 3 | W Mean | 5.849 | 0.192 | 0.111 | 5.642 | 6.021 | 0.891 |
| B | DPVS | UR1 | BX | 3 | P Mean | 5.846 | 0.222 | 0.128 | 5.598 | 6.026 | |
| B | DPVS | UR1 | BY | 3 | W Mean | 13.604 | 0.680 | 0.393 | 12.962 | 14.317 | 0.4014 |
| B | DPVS | UR1 | BY | 3 | P Mean | 13.171 | 0.109 | 0.063 | 13.096 | 13.296 | |
| B | DPVS | UR1 | C | 3 | W Mean | 13.594 | 0.110 | 0.064 | 13.483 | 13.703 | 0.126 |
| B | DPVS | UR1 | C | 3 | P Mean | 13.466 | 0.024 | 0.014 | 13.447 | 13.493 | |
| B | DPVS | UR1 | D | 3 | W Mean | 13.841 | 0.151 | 0.087 | 13.700 | 14.000 | 0.1586 |
| B | DPVS | UR1 | D | 3 | P Mean | 13.68 | 0.054 | 0.03 | 13.64 | 13.74 | |

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| B | DPVS | UR2 | AX | 3 | W Mean | 10.307 | 0.122 | 0.070 | 10.206 | 10.442 | 0.442 |
| B | DPVS | UR2 | AX | 3 | P Mean | 10.386 | 0.246 | 0.142 | 10.208 | 10.667 | |
| B | DPVS | UR2 | AY | 3 | W Mean | 11.542 | 0.489 | 0.282 | 10.987 | 11.911 | 0.652 |
| B | DPVS | UR2 | AY | 3 | P Mean | 11.357 | 0.240 | 0.138 | 11.102 | 11.577 | |
| B | DPVS | UR2 | BX | 3 | W Mean | 11.283 | 0.141 | 0.081 | 11.168 | 11.440 | 0.446 |
| B | DPVS | UR2 | BX | 3 | P Mean | 11.365 | 0.276 | 0.159 | 11.188 | 11.683 | |
| B | DPVS | UR2 | BY | 3 | W Mean | 11.503 | 0.464 | 0.268 | 10.979 | 11.862 | 0.6455 |
| B | DPVS | UR2 | BY | 3 | P Mean | 11.303 | 0.278 | 0.160 | 10.990 | 11.520 | |
| B | DPVS | UR2 | C | 3 | W Mean | 13.592 | 0.129 | 0.075 | 13.500 | 13.740 | 0.239 |
| B | DPVS | UR2 | C | 3 | P Mean | 13.462 | 0.060 | 0.035 | 13.403 | 13.523 | |
| B | DPVS | UR2 | D | 3 | W Mean | 13.469 | 0.191 | 0.110 | 13.250 | 13.600 | 0.4079 |
| B | DPVS | UR2 | D | 3 | P Mean | 13.355 | 0.092 | 0.053 | 13.287 | 13.460 | |
| B | DPVS | UR3 | AX | 3 | W Mean | 6.453 | 0.137 | 0.079 | 6.301 | 6.566 | 0.662 |
| B | DPVS | UR3 | AX | 3 | P Mean | 6.492 | 0.076 | 0.044 | 6.419 | 6.570 | |
| B | DPVS | UR3 | AY | 3 | W Mean | 13.535 | 0.031 | 0.018 | 13.513 | 13.570 | 0.5948 |
| B | DPVS | UR3 | AY | 3 | P Mean | 13.413 | 0.310 | 0.179 | 13.087 | 13.704 | |
| B | DPVS | UR3 | BX | 3 | W Mean | 7.801 | 0.149 | 0.086 | 7.641 | 7.936 | 0.726 |
| B | DPVS | UR3 | BX | 3 | P Mean | 7.825 | 0.092 | 0.053 | 7.764 | 7.930 | |
| B | DPVS | UR3 | BY | 3 | W Mean | 13.550 | 0.083 | 0.048 | 13.456 | 13.615 | 0.5773 |
| B | DPVS | UR3 | BY | 3 | P Mean | 13.409 | 0.351 | 0.202 | 13.083 | 13.780 | |
| B | DPVS | UR3 | C | 3 | W Mean | 11.748 | 0.067 | 0.038 | 11.680 | 11.813 | 0.340 |
| B | DPVS | UR3 | C | 3 | P Mean | 11.701 | 0.011 | 0.006 | 11.693 | 11.713 | |
| B | DPVS | UR3 | D | 3 | W Mean | 11.958 | 0.016 | 0.009 | 11.940 | 11.967 | 0.0219 * |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| B | DPVS | UR3 | D | 3 | P Mean | 11.867 | 0.039 | 0.022 | 11.823 | 11.897 | |
| B | DPVS | UR4 | AX | 3 | W Mean | 8.296 | 0.225 | 0.130 | 8.102 | 8.543 | 0.636 |
| B | DPVS | UR4 | AX | 3 | P Mean | 8.372 | 0.039 | 0.022 | 8.346 | 8.417 | |
| B | DPVS | UR4 | AY | 3 | W Mean | 11.858 | 0.349 | 0.201 | 11.537 | 12.229 | 0.8444 |
| B | DPVS | UR4 | AY | 3 | P Mean | 11.803 | 0.296 | 0.171 | 11.461 | 11.975 | |
| B | DPVS | UR4 | BX | 3 | W Mean | 9.554 | 0.184 | 0.106 | 9.434 | 9.765 | 0.676 |
| B | DPVS | UR4 | BX | 3 | P Mean | 9.616 | 0.046 | 0.027 | 9.575 | 9.666 | |
| B | DPVS | UR4 | BY | 3 | W Mean | 11.949 | 0.385 | 0.223 | 11.616 | 12.371 | 0.8498 |
| B | DPVS | UR4 | BY | 3 | P Mean | 11.894 | 0.303 | 0.175 | 11.544 | 12.070 | |
| B | DPVS | UR4 | C | 3 | W Mean | 9.404 | 0.048 | 0.028 | 9.350 | 9.443 | 0.611 |
| B | DPVS | UR4 | C | 3 | P Mean | 9.387 | 0.047 | 0.027 | 9.353 | 9.440 | |
| B | DPVS | UR4 | D | 3 | W Mean | 9.129 | 0.024 | 0.014 | 9.103 | 9.150 | 0.3777 |
| B | DPVS | UR4 | D | 3 | P Mean | 9.095 | 0.033 | 0.019 | 9.057 | 9.117 | |
| B | DPVS | UR5 | AX | 3 | W Mean | 8.075 | 0.323 | 0.186 | 7.821 | 8.438 | 0.509 |
| B | DPVS | UR5 | AX | 3 | P Mean | 8.138 | 0.236 | 0.136 | 7.891 | 8.361 | |
| B | DPVS | UR5 | AY | 3 | W Mean | 10.090 | 0.226 | 0.130 | 9.831 | 10.243 | 0.6862 |
| B | DPVS | UR5 | AY | 3 | P Mean | 10.024 | 0.217 | 0.125 | 9.853 | 10.268 | |
| B | DPVS | UR5 | BX | 3 | W Mean | 9.301 | 0.286 | 0.165 | 9.066 | 9.619 | 0.591 |
| B | DPVS | UR5 | BX | 3 | P Mean | 9.346 | 0.228 | 0.132 | 9.099 | 9.548 | |
| B | DPVS | UR5 | BY | 3 | W Mean | 10.127 | 0.231 | 0.133 | 9.863 | 10.290 | 0.6528 |
| B | DPVS | UR5 | BY | 3 | P Mean | 10.060 | 0.226 | 0.130 | 9.909 | 10.320 | |
| B | DPVS | UR5 | C | 3 | W Mean | 9.729 | 0.097 | 0.056 | 9.617 | 9.787 | 0.382 |
| B | DPVS | UR5 | C | 3 | P Mean | 9.674 | 0.040 | 0.023 | 9.650 | 9.720 | |
| B | DPVS | UR5 | D | 3 | W Mean | 9.813 | 0.122 | 0.07 | 9.673 | 9.897 | 0.1455 |

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| B | DPVS | UR5 | D | 3 | P Mean | 9.723 | 0.062 | 0.036 | 9.653 | 9.773 | |
| B | DPVS | UR6 | AX | 3 | W Mean | 5.491 | 0.271 | 0.156 | 5.236 | 5.775 | 0.629 |
| B | DPVS | UR6 | AX | 3 | P Mean | 5.540 | 0.189 | 0.109 | 5.322 | 5.659 | |
| B | DPVS | UR6 | AY | 3 | W Mean | 10.743 | 0.425 | 0.245 | 10.457 | 11.231 | 0.4336 |
| B | DPVS | UR6 | AY | 3 | P Mean | 10.542 | 0.258 | 0.149 | 10.248 | 10.728 | |
| B | DPVS | UR6 | BX | 3 | W Mean | 7.540 | 0.239 | 0.138 | 7.318 | 7.793 | 0.532 |
| B | DPVS | UR6 | BX | 3 | P Mean | 7.595 | 0.172 | 0.099 | 7.397 | 7.711 | |
| B | DPVS | UR6 | BY | 3 | W Mean | 10.675 | 0.351 | 0.203 | 10.453 | 11.080 | 0.4661 |
| B | DPVS | UR6 | BY | 3 | P Mean | 10.515 | 0.213 | 0.123 | 10.270 | 10.646 | |
| B | DPVS | UR6 | C | 3 | W Mean | 7.467 | 0.131 | 0.076 | 7.347 | 7.607 | 0.354 |
| B | DPVS | UR6 | C | 3 | P Mean | 7.369 | 0.086 | 0.049 | 7.270 | 7.423 | |
| B | DPVS | UR6 | D | 3 | W Mean | 7.901 | 0.125 | 0.072 | 7.757 | 7.977 | 0.2771 |
| B | DPVS | UR6 | D | 3 | P Mean | 7.770 | 0.029 | 0.017 | 7.750 | 7.803 | |
| B | DVF | UL1 | AX | 3 | W Mean | 6.550 | 0.313 | 0.181 | 6.358 | 6.911 | 0.518 |
| B | DVF | UL1 | AX | 3 | P Mean | 6.685 | 0.323 | 0.186 | 6.314 | 6.903 | |
| B | DVF | UL1 | AY | 3 | W Mean | 9.564 | 0.032 | 0.019 | 9.530 | 9.594 | 0.2 |
| B | DVF | UL1 | AY | 3 | P Mean | 9.813 | 0.197 | 0.114 | 9.643 | 10.029 | |
| B | DVF | UL1 | BX | 3 | W Mean | 8.343 | 0.103 | 0.060 | 8.272 | 8.461 | 0.655 |
| B | DVF | UL1 | BX | 3 | P Mean | 8.369 | 0.122 | 0.070 | 8.238 | 8.478 | |
| B | DVF | UL1 | BY | 3 | W Mean | 9.525 | 0.043 | 0.025 | 9.478 | 9.562 | 0.1962 |
| B | DVF | UL1 | BY | 3 | P Mean | 9.790 | 0.206 | 0.119 | 9.603 | 10.010 | |
| B | DVF | UL1 | C | 3 | W Mean | 13.232 | 0.010 | 0.006 | 13.223 | 13.243 | 0.110 |
| B | DVF | UL1 | C | 3 | P Mean | 13.270 | 0.015 | 0.009 | 13.260 | 13.287 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| B | DVF | UL1 | D | 3 | W Mean | 13.454 | 0.022 | 0.013 | 13.430 | 13.473 | 0.6804 |
| B | DVF | UL1 | D | 3 | P Mean | 13.445 | 0.057 | 0.033 | 13.380 | 13.487 | |
| B | DVF | UL2 | AX | 3 | W Mean | 6.791 | 0.193 | 0.111 | 6.569 | 6.904 | 0.640 |
| B | DVF | UL2 | AX | 3 | P Mean | 6.705 | 0.093 | 0.054 | 6.606 | 6.791 | |
| B | DVF | UL2 | AY | 3 | W Mean | 12.788 | 0.083 | 0.048 | 12.739 | 12.883 | 0.932 |
| B | DVF | UL2 | AY | 3 | P Mean | 12.798 | 0.106 | 0.061 | 12.683 | 12.892 | |
| B | DVF | UL2 | BX | 3 | W Mean | 7.811 | 0.251 | 0.145 | 7.522 | 7.961 | 0.493 |
| B | DVF | UL2 | BX | 3 | P Mean | 7.674 | 0.099 | 0.057 | 7.566 | 7.762 | |
| B | DVF | UL2 | BY | 3 | W Mean | 12.819 | 0.017 | 0.010 | 12.807 | 12.839 | 0.9452 |
| B | DVF | UL2 | BY | 3 | P Mean | 12.812 | 0.147 | 0.085 | 12.643 | 12.908 | |
| B | DVF | UL2 | C | 3 | W Mean | 13.779 | 0.043 | 0.025 | 13.733 | 13.817 | 0.246 |
| B | DVF | UL2 | C | 3 | P Mean | 13.636 | 0.175 | 0.101 | 13.463 | 13.813 | |
| B | DVF | UL2 | D | 3 | W Mean | 13.516 | 0.094 | 0.054 | 13.437 | 13.620 | 0.4754 |
| B | DVF | UL2 | D | 3 | P Mean | 13.438 | 0.069 | 0.040 | 13.363 | 13.500 | |
| B | DVF | UL3 | AX | 3 | W Mean | 6.527 | 0.146 | 0.084 | 6.358 | 6.617 | 0.353 |
| B | DVF | UL3 | AX | 3 | P Mean | 6.343 | 0.170 | 0.098 | 6.148 | 6.465 | |
| B | DVF | UL3 | AY | 3 | W Mean | 12.336 | 0.058 | 0.034 | 12.271 | 12.384 | 0.1342 |
| B | DVF | UL3 | AY | 3 | P Mean | 12.191 | 0.141 | 0.082 | 12.041 | 12.322 | |
| B | DVF | UL3 | BX | 3 | W Mean | 7.882 | 0.160 | 0.092 | 7.698 | 7.987 | 0.261 |
| B | DVF | UL3 | BX | 3 | P Mean | 7.658 | 0.169 | 0.098 | 7.482 | 7.820 | |
| B | DVF | UL3 | BY | 3 | W Mean | 12.236 | 0.100 | 0.058 | 12.123 | 12.313 | 0.2594 |
| B | DVF | UL3 | BY | 3 | P Mean | 12.120 | 0.203 | 0.117 | 11.899 | 12.297 | |
| B | DVF | UL3 | C | 3 | W Mean | 11.869 | 0.083 | 0.048 | 11.810 | 11.963 | 0.197 |
| B | DVF | UL3 | C | 3 | P Mean | 11.95 | 0.005 | 0.00 | 11.95 | 11.96 | |

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| | | | | | | 4 | | 3 | 0 | 0 | |
| B | DVF | UL3 | D | 3 | W Mean | 12.089 | 0.030 | 0.017 | 12.070 | 12.123 | 0.5381 |
| B | DVF | UL3 | D | 3 | P Mean | 12.113 | 0.064 | 0.037 | 12.040 | 12.153 | |
| B | DVF | UL4 | AX | 3 | W Mean | 1.544 | 0.032 | 0.018 | 1.516 | 1.578 | 0.406 |
| B | DVF | UL4 | AX | 3 | P Mean | 1.479 | 0.138 | 0.079 | 1.334 | 1.608 | |
| B | DVF | UL4 | AY | 3 | W Mean | 16.267 | 0.264 | 0.152 | 15.964 | 16.447 | 0.3903 |
| B | DVF | UL4 | AY | 3 | P Mean | 16.001 | 0.343 | 0.198 | 15.691 | 16.370 | |
| B | DVF | UL4 | BX | 3 | W Mean | 2.830 | 0.039 | 0.022 | 2.801 | 2.874 | 0.415 |
| B | DVF | UL4 | BX | 3 | P Mean | 2.730 | 0.200 | 0.116 | 2.507 | 2.895 | |
| B | DVF | UL4 | BY | 3 | W Mean | 16.123 | 0.272 | 0.157 | 15.811 | 16.305 | 0.3832 |
| B | DVF | UL4 | BY | 3 | P Mean | 15.875 | 0.333 | 0.192 | 15.609 | 16.248 | |
| B | DVF | UL4 | C | 3 | W Mean | 9.617 | 0.089 | 0.051 | 9.537 | 9.713 | 0.0135 * |
| B | DVF | UL4 | C | 3 | P Mean | 9.570 | 0.084 | 0.048 | 9.490 | 9.657 | |
| B | DVF | UL4 | D | 3 | W Mean | 9.587 | 0.056 | 0.033 | 9.523 | 9.630 | 0.188 |
| B | DVF | UL4 | D | 3 | P Mean | 9.519 | 0.044 | 0.026 | 9.493 | 9.570 | |
| B | DVF | UL5 | AX | 3 | W Mean | 8.949 | 0.018 | 0.010 | 8.931 | 8.967 | 0.367 |
| B | DVF | UL5 | AX | 3 | P Mean | 8.836 | 0.152 | 0.088 | 8.664 | 8.953 | |
| B | DVF | UL5 | AY | 3 | W Mean | 10.962 | 0.043 | 0.025 | 10.936 | 11.012 | 0.0737 |
| B | DVF | UL5 | AY | 3 | P Mean | 10.626 | 0.136 | 0.078 | 10.520 | 10.779 | |
| B | DVF | UL5 | BX | 3 | W Mean | 10.092 | 0.013 | 0.008 | 10.079 | 10.105 | 0.563 |
| B | DVF | UL5 | BX | 3 | P Mean | 10.066 | 0.058 | 0.033 | 10.012 | 10.127 | |
| B | DVF | UL5 | BY | 3 | W Mean | 10.893 | 0.071 | 0.041 | 10.850 | 10.975 | 0.0851 |
| B | DVF | UL5 | BY | 3 | P Mean | 10.565 | 0.110 | 0.063 | 10.449 | 10.667 | |
| B | DVF | UL5 | C | 3 | W Mean | 9.122 | 0.116 | 0.067 | 8.997 | 9.227 | 0.474 |

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| B | DVF | UL5 | C | 3 | P Mean | 9.087 | 0.122 | 0.070 | 9.007 | 9.227 | |
| B | DVF | UL5 | D | 3 | W Mean | 8.975 | 0.054 | 0.031 | 8.913 | 9.010 | 0.1951 |
| B | DVF | UL5 | D | 3 | P Mean | 8.907 | 0.080 | 0.046 | 8.843 | 8.997 | |
| B | DVF | UL6 | AX | 3 | W Mean | 6.888 | 0.033 | 0.019 | 6.852 | 6.915 | 0.421 |
| B | DVF | UL6 | AX | 3 | P Mean | 6.645 | 0.391 | 0.226 | 6.218 | 6.985 | |
| B | DVF | UL6 | AY | 3 | W Mean | 10.665 | 0.083 | 0.048 | 10.602 | 10.759 | 0.1971 |
| B | DVF | UL6 | AY | 3 | P Mean | 10.287 | 0.268 | 0.155 | 9.989 | 10.510 | |
| B | DVF | UL6 | BX | 3 | W Mean | 8.966 | 0.014 | 0.008 | 8.954 | 8.981 | 0.485 |
| B | DVF | UL6 | BX | 3 | P Mean | 8.778 | 0.370 | 0.214 | 8.364 | 9.076 | |
| B | DVF | UL6 | BY | 3 | W Mean | 10.785 | 0.027 | 0.015 | 10.765 | 10.815 | 0.212 |
| B | DVF | UL6 | BY | 3 | P Mean | 10.414 | 0.371 | 0.214 | 10.005 | 10.728 | |
| B | DVF | UL6 | C | 3 | W Mean | 7.768 | 0.062 | 0.036 | 7.697 | 7.813 | 0.267 |
| B | DVF | UL6 | C | 3 | P Mean | 7.734 | 0.087 | 0.050 | 7.637 | 7.803 | |
| B | DVF | UL6 | D | 3 | W Mean | 8.199 | 0.046 | 0.027 | 8.160 | 8.250 | 0.0743 |
| B | DVF | UL6 | D | 3 | P Mean | 8.122 | 0.071 | 0.041 | 8.067 | 8.203 | |
| B | DVF | UR1 | AX | 3 | W Mean | 4.451 | 0.095 | 0.055 | 4.379 | 4.559 | 0.837 |
| B | DVF | UR1 | AX | 3 | P Mean | 4.384 | 0.398 | 0.230 | 3.969 | 4.762 | |
| B | DVF | UR1 | AY | 3 | W Mean | 13.313 | 0.017 | 0.010 | 13.294 | 13.326 | 0.6087 |
| B | DVF | UR1 | AY | 3 | P Mean | 13.204 | 0.329 | 0.190 | 12.873 | 13.531 | |
| B | DVF | UR1 | BX | 3 | W Mean | 6.003 | 0.145 | 0.084 | 5.912 | 6.170 | 0.872 |
| B | DVF | UR1 | BX | 3 | P Mean | 5.937 | 0.492 | 0.284 | 5.425 | 6.407 | |
| B | DVF | UR1 | BY | 3 | W Mean | 13.371 | 0.044 | 0.025 | 13.338 | 13.421 | 0.447 |
| B | DVF | UR1 | BY | 3 | P Mean | 13.225 | 0.308 | 0.178 | 12.895 | 13.506 | |
| B | DVF | UR1 | C | 3 | W Mean | 13.60 | 0.049 | 0.02 | 13.57 | 13.66 | 0.018* |

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| | | | | | | 3 | | 8 | 0 | 0 | |
| B | DVF | UR1 | C | 3 | P Mean | 13.653 | 0.049 | 0.028 | 13.610 | 13.707 | |
| B | DVF | UR1 | D | 3 | W Mean | 13.719 | 0.032 | 0.018 | 13.690 | 13.753 | 0.7922 |
| B | DVF | UR1 | D | 3 | P Mean | 13.713 | 0.024 | 0.014 | 13.687 | 13.733 | |
| B | DVF | UR2 | AX | 3 | W Mean | 10.520 | 0.170 | 0.098 | 10.393 | 10.713 | 0.670 |
| B | DVF | UR2 | AX | 3 | P Mean | 10.483 | 0.170 | 0.098 | 10.306 | 10.646 | |
| B | DVF | UR2 | AY | 3 | W Mean | 11.200 | 0.229 | 0.132 | 11.060 | 11.465 | 0.8845 |
| B | DVF | UR2 | AY | 3 | P Mean | 11.188 | 0.358 | 0.207 | 10.946 | 11.599 | |
| B | DVF | UR2 | BX | 3 | W Mean | 11.528 | 0.145 | 0.083 | 11.410 | 11.689 | 0.766 |
| B | DVF | UR2 | BX | 3 | P Mean | 11.494 | 0.138 | 0.080 | 11.335 | 11.577 | |
| B | DVF | UR2 | BY | 3 | W Mean | 11.177 | 0.250 | 0.144 | 11.025 | 11.465 | 0.8905 |
| B | DVF | UR2 | BY | 3 | P Mean | 11.187 | 0.360 | 0.208 | 10.955 | 11.602 | |
| B | DVF | UR2 | C | 3 | W Mean | 13.566 | 0.078 | 0.045 | 13.483 | 13.637 | 0.225 |
| B | DVF | UR2 | C | 3 | P Mean | 13.417 | 0.183 | 0.105 | 13.267 | 13.620 | |
| B | DVF | UR2 | D | 3 | W Mean | 13.382 | 0.017 | 0.010 | 13.363 | 13.397 | 0.6095 |
| B | DVF | UR2 | D | 3 | P Mean | 13.325 | 0.182 | 0.105 | 13.117 | 13.457 | |
| B | DVF | UR3 | AX | 3 | W Mean | 6.751 | 0.077 | 0.044 | 6.705 | 6.840 | 0.602 |
| B | DVF | UR3 | AX | 2 | P Mean | 6.997 | 0.345 | 0.244 | 6.753 | 7.241 | |
| B | DVF | UR3 | AY | 3 | W Mean | 13.773 | 0.044 | 0.026 | 13.723 | 13.807 | 0.6183 |
| B | DVF | UR3 | AY | 2 | P Mean | 13.616 | 0.368 | 0.260 | 13.356 | 13.876 | |
| B | DVF | UR3 | BX | 3 | W Mean | 8.122 | 0.077 | 0.044 | 8.069 | 8.210 | 0.695 |
| B | DVF | UR3 | BX | 2 | P Mean | 8.305 | 0.351 | 0.248 | 8.057 | 8.553 | |
| B | DVF | UR3 | BY | 3 | W Mean | 13.726 | 0.037 | 0.021 | 13.685 | 13.756 | 0.6423 |
| B | DVF | UR3 | BY | 2 | P Mean | 13.576 | 0.375 | 0.265 | 13.311 | 13.841 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| B | DVF | UR3 | C | 3 | W Mean | 11.774 | 0.075 | 0.043 | 11.723 | 11.860 | 0.343 |
| B | DVF | UR3 | C | 2 | P Mean | 11.859 | 0.040 | 0.029 | 11.830 | 11.887 | |
| B | DVF | UR3 | D | 3 | W Mean | 11.916 | 0.075 | 0.043 | 11.843 | 11.993 | 0.3667 |
| B | DVF | UR3 | D | 2 | P Mean | 11.967 | 0.062 | 0.044 | 11.923 | 12.010 | |
| B | DVF | UR4 | AX | 3 | W Mean | 8.285 | 0.061 | 0.035 | 8.228 | 8.350 | 0.626 |
| B | DVF | UR4 | AX | 2 | P Mean | 8.175 | 0.130 | 0.092 | 8.083 | 8.267 | |
| B | DVF | UR4 | AY | 3 | W Mean | 12.101 | 0.187 | 0.108 | 11.955 | 12.312 | 0.5437 |
| B | DVF | UR4 | AY | 2 | P Mean | 11.819 | 0.229 | 0.162 | 11.657 | 11.981 | |
| B | DVF | UR4 | BX | 3 | W Mean | 9.564 | 0.130 | 0.075 | 9.459 | 9.710 | 0.631 |
| B | DVF | UR4 | BX | 2 | P Mean | 9.380 | 0.196 | 0.139 | 9.241 | 9.518 | |
| B | DVF | UR4 | BY | 3 | W Mean | 12.158 | 0.192 | 0.111 | 11.999 | 12.371 | 0.5305 |
| B | DVF | UR4 | BY | 2 | P Mean | 11.892 | 0.174 | 0.123 | 11.769 | 12.015 | |
| B | DVF | UR4 | C | 3 | W Mean | 9.357 | 0.053 | 0.031 | 9.297 | 9.400 | 0.500 |
| B | DVF | UR4 | C | 2 | P Mean | 9.462 | 0.087 | 0.062 | 9.400 | 9.523 | |
| B | DVF | UR4 | D | 3 | W Mean | 9.103 | 0.047 | 0.027 | 9.057 | 9.150 | 0.5955 |
| B | DVF | UR4 | D | 2 | P Mean | 9.140 | 0.004 | 0.003 | 9.137 | 9.143 | |
| B | DVF | UR5 | AX | 3 | W Mean | 8.031 | 0.291 | 0.168 | 7.851 | 8.366 | 0.374 |
| B | DVF | UR5 | AX | 3 | P Mean | 8.213 | 0.217 | 0.125 | 7.962 | 8.346 | |
| B | DVF | UR5 | AY | 3 | W Mean | 10.701 | 0.025 | 0.015 | 10.674 | 10.724 | 0.1951 |
| B | DVF | UR5 | AY | 3 | P Mean | 10.341 | 0.324 | 0.187 | 9.970 | 10.565 | |
| B | DVF | UR5 | BX | 3 | W Mean | 9.301 | 0.255 | 0.147 | 9.152 | 9.595 | 0.331 |
| B | DVF | UR5 | BX | 3 | P Mean | 9.469 | 0.165 | 0.095 | 9.279 | 9.571 | |
| B | DVF | UR5 | BY | 3 | W Mean | 10.690 | 0.029 | 0.016 | 10.662 | 10.719 | 0.1586 |
| B | DVF | UR5 | BY | 3 | P Mean | 10.39 | 0.260 | 0.15 | 10.09 | 10.57 | |

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| B | DVF | UR5 | C | 3 | W Mean | 9.700 | 0.033 | 0.019 | 9.673 | 9.737 | 0.088 |
| B | DVF | UR5 | C | 3 | P Mean | 9.755 | 0.049 | 0.028 | 9.710 | 9.807 | |
| B | DVF | UR5 | D | 3 | W Mean | 9.786 | 0.040 | 0.023 | 9.740 | 9.817 | 0.1353 |
| B | DVF | UR5 | D | 3 | P Mean | 9.819 | 0.064 | 0.037 | 9.747 | 9.870 | |
| B | DVF | UR6 | AX | 3 | W Mean | 5.444 | 0.030 | 0.017 | 5.425 | 5.478 | 0.477 |
| B | DVF | UR6 | AX | 3 | P Mean | 5.155 | 0.594 | 0.343 | 4.470 | 5.522 | |
| B | DVF | UR6 | AY | 3 | W Mean | 11.520 | 0.269 | 0.155 | 11.364 | 11.830 | 0.6426 |
| B | DVF | UR6 | AY | 3 | P Mean | 11.338 | 0.459 | 0.265 | 10.947 | 11.844 | |
| B | DVF | UR6 | BX | 3 | W Mean | 7.501 | 0.033 | 0.019 | 7.479 | 7.539 | 0.504 |
| B | DVF | UR6 | BX | 3 | P Mean | 7.237 | 0.580 | 0.335 | 6.567 | 7.578 | |
| B | DVF | UR6 | BY | 3 | W Mean | 11.448 | 0.318 | 0.184 | 11.262 | 11.815 | 0.5046 |
| B | DVF | UR6 | BY | 3 | P Mean | 11.254 | 0.315 | 0.182 | 10.919 | 11.544 | |
| B | DVF | UR6 | C | 3 | W Mean | 7.349 | 0.058 | 0.034 | 7.300 | 7.413 | 0.972 |
| B | DVF | UR6 | C | 3 | P Mean | 7.351 | 0.142 | 0.082 | 7.223 | 7.503 | |
| B | DVF | UR6 | D | 3 | W Mean | 7.858 | 0.139 | 0.080 | 7.720 | 7.997 | 0.2476 |
| B | DVF | UR6 | D | 3 | P Mean | 7.803 | 0.094 | 0.054 | 7.733 | 7.910 | |
| B | PVSP | UL1 | AX | 3 | W Mean | 6.726 | 0.125 | 0.072 | 6.627 | 6.866 | 0.167 |
| B | PVSP | UL1 | AX | 3 | P Mean | 6.659 | 0.172 | 0.100 | 6.497 | 6.840 | |
| B | PVSP | UL1 | AY | 3 | W Mean | 9.718 | 0.238 | 0.137 | 9.499 | 9.971 | 0.7623 |
| B | PVSP | UL1 | AY | 3 | P Mean | 9.836 | 0.444 | 0.257 | 9.413 | 10.299 | |
| B | PVSP | UL1 | BX | 3 | W Mean | 8.359 | 0.105 | 0.061 | 8.260 | 8.469 | 0.173 |
| B | PVSP | UL1 | BX | 3 | P Mean | 8.279 | 0.171 | 0.099 | 8.107 | 8.449 | |
| B | PVSP | UL1 | BY | 3 | W Mean | 9.678 | 0.274 | 0.158 | 9.439 | 9.977 | 0.7183 |

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| B | PVSP | UL1 | BY | 3 | P Mean | 9.818 | 0.432 | 0.249 | 9.386 | 10.250 | |
| B | PVSP | UL1 | C | 3 | W Mean | 13.311 | 0.098 | 0.057 | 13.240 | 13.423 | 0.202 |
| B | PVSP | UL1 | C | 3 | P Mean | 13.156 | 0.050 | 0.029 | 13.103 | 13.203 | |
| B | PVSP | UL1 | D | 3 | W Mean | 13.502 | 0.097 | 0.056 | 13.400 | 13.593 | 0.1672 |
| B | PVSP | UL1 | D | 3 | P Mean | 13.330 | 0.045 | 0.026 | 13.280 | 13.367 | |
| B | PVSP | UL2 | AX | 3 | W Mean | 6.333 | 0.161 | 0.093 | 6.152 | 6.459 | 0.833 |
| B | PVSP | UL2 | AX | 3 | P Mean | 6.312 | 0.039 | 0.023 | 6.278 | 6.355 | |
| B | PVSP | UL2 | AY | 3 | W Mean | 12.959 | 0.227 | 0.131 | 12.757 | 13.205 | 0.7679 |
| B | PVSP | UL2 | AY | 3 | P Mean | 13.034 | 0.338 | 0.195 | 12.747 | 13.407 | |
| B | PVSP | UL2 | BX | 3 | W Mean | 7.387 | 0.214 | 0.123 | 7.145 | 7.548 | 0.569 |
| B | PVSP | UL2 | BX | 3 | P Mean | 7.325 | 0.099 | 0.057 | 7.261 | 7.439 | |
| B | PVSP | UL2 | BY | 3 | W Mean | 12.960 | 0.250 | 0.145 | 12.815 | 13.249 | 0.7048 |
| B | PVSP | UL2 | BY | 3 | P Mean | 13.059 | 0.270 | 0.156 | 12.813 | 13.348 | |
| B | PVSP | UL2 | C | 3 | W Mean | 13.758 | 0.146 | 0.084 | 13.590 | 13.847 | 0.696 |
| B | PVSP | UL2 | C | 3 | P Mean | 13.696 | 0.100 | 0.058 | 13.600 | 13.800 | |
| B | PVSP | UL2 | D | 3 | W Mean | 13.573 | 0.150 | 0.087 | 13.407 | 13.700 | 0.6603 |
| B | PVSP | UL2 | D | 3 | P Mean | 13.506 | 0.080 | 0.046 | 13.427 | 13.587 | |
| B | PVSP | UL3 | AX | 3 | W Mean | 6.168 | 0.045 | 0.026 | 6.117 | 6.204 | 0.0273* |
| B | PVSP | UL3 | AX | 3 | P Mean | 6.043 | 0.059 | 0.034 | 5.980 | 6.098 | |
| B | PVSP | UL3 | AY | 3 | W Mean | 12.166 | 0.066 | 0.038 | 12.092 | 12.219 | 0.0909 |
| B | PVSP | UL3 | AY | 3 | P Mean | 12.432 | 0.100 | 0.058 | 12.324 | 12.522 | |
| B | PVSP | UL3 | BX | 3 | W Mean | 7.483 | 0.068 | 0.039 | 7.416 | 7.551 | 0.028* |
| B | PVSP | UL3 | BX | 3 | P Mean | 7.363 | 0.075 | 0.044 | 7.276 | 7.410 | |
| B | PVSP | UL3 | BY | 3 | W Mean | 12.05 | 0.117 | 0.06 | 11.92 | 12.13 | 0.0743 |

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| B | PVSP | UL3 | BY | 3 | P Mean | 12.365 | 0.064 | 0.037 | 12.291 | 12.405 | |
| B | PVSP | UL3 | C | 3 | W Mean | 11.762 | 0.020 | 0.012 | 11.740 | 11.780 | 0.719 |
| B | PVSP | UL3 | C | 3 | P Mean | 11.791 | 0.099 | 0.057 | 11.713 | 11.903 | |
| B | PVSP | UL3 | D | 3 | W Mean | 11.995 | 0.054 | 0.031 | 11.933 | 12.030 | 0.9928 |
| B | PVSP | UL3 | D | 3 | P Mean | 11.995 | 0.074 | 0.043 | 11.910 | 12.047 | |
| B | PVSP | UL4 | AX | 3 | W Mean | 1.470 | 0.123 | 0.071 | 1.328 | 1.547 | 0.488 |
| B | PVSP | UL4 | AX | 3 | P Mean | 1.502 | 0.059 | 0.034 | 1.434 | 1.544 | |
| B | PVSP | UL4 | AY | 3 | W Mean | 16.192 | 0.161 | 0.093 | 16.006 | 16.291 | 0.0834 |
| B | PVSP | UL4 | AY | 3 | P Mean | 16.451 | 0.182 | 0.105 | 16.314 | 16.658 | |
| B | PVSP | UL4 | BX | 3 | W Mean | 2.758 | 0.102 | 0.059 | 2.662 | 2.866 | 0.300 |
| B | PVSP | UL4 | BX | 3 | P Mean | 2.742 | 0.092 | 0.053 | 2.668 | 2.845 | |
| B | PVSP | UL4 | BY | 3 | W Mean | 16.098 | 0.221 | 0.128 | 15.857 | 16.291 | 0.0793 |
| B | PVSP | UL4 | BY | 3 | P Mean | 16.362 | 0.270 | 0.156 | 16.159 | 16.669 | |
| B | PVSP | UL4 | C | 3 | W Mean | 9.663 | 0.079 | 0.046 | 9.577 | 9.733 | 0.566 |
| B | PVSP | UL4 | C | 3 | P Mean | 9.727 | 0.082 | 0.047 | 9.650 | 9.813 | |
| B | PVSP | UL4 | D | 3 | W Mean | 9.680 | 0.095 | 0.055 | 9.573 | 9.753 | 0.326 |
| B | PVSP | UL4 | D | 3 | P Mean | 9.758 | 0.011 | 0.006 | 9.750 | 9.770 | |
| B | PVSP | UL5 | AX | 3 | W Mean | 8.978 | 0.193 | 0.111 | 8.814 | 9.190 | 0.0146 * |
| B | PVSP | UL5 | AX | 3 | P Mean | 8.925 | 0.202 | 0.117 | 8.757 | 9.150 | |
| B | PVSP | UL5 | AY | 3 | W Mean | 10.622 | 0.306 | 0.177 | 10.342 | 10.949 | 0.2096 |
| B | PVSP | UL5 | AY | 3 | P Mean | 10.977 | 0.187 | 0.108 | 10.824 | 11.186 | |
| B | PVSP | UL5 | BX | 3 | W Mean | 10.187 | 0.099 | 0.057 | 10.126 | 10.301 | 0.151 |
| B | PVSP | UL5 | BX | 3 | P Mean | 10.094 | 0.146 | 0.084 | 9.958 | 10.248 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| B | PVSP | UL5 | BY | 3 | W Mean | 10.541 | 0.231 | 0.133 | 10.333 | 10.789 | 0.2107 |
| B | PVSP | UL5 | BY | 3 | P Mean | 10.878 | 0.180 | 0.104 | 10.763 | 11.085 | |
| B | PVSP | UL5 | C | 3 | W Mean | 9.179 | 0.079 | 0.046 | 9.127 | 9.270 | 0.930 |
| B | PVSP | UL5 | C | 3 | P Mean | 9.172 | 0.048 | 0.027 | 9.140 | 9.227 | |
| B | PVSP | UL5 | D | 3 | W Mean | 9.009 | 0.032 | 0.018 | 8.977 | 9.040 | 0.608 |
| B | PVSP | UL5 | D | 3 | P Mean | 9.037 | 0.048 | 0.028 | 8.987 | 9.083 | |
| B | PVSP | UL6 | AX | 3 | W Mean | 6.668 | 0.393 | 0.227 | 6.268 | 7.053 | 0.086 |
| B | PVSP | UL6 | AX | 3 | P Mean | 6.532 | 0.336 | 0.194 | 6.169 | 6.833 | |
| B | PVSP | UL6 | AY | 3 | W Mean | 10.110 | 0.322 | 0.186 | 9.779 | 10.422 | 0.0006 * |
| B | PVSP | UL6 | AY | 3 | P Mean | 10.715 | 0.303 | 0.175 | 10.395 | 10.998 | |
| B | PVSP | UL6 | BX | 3 | W Mean | 8.730 | 0.407 | 0.235 | 8.298 | 9.107 | 0.207 |
| B | PVSP | UL6 | BX | 3 | P Mean | 8.662 | 0.347 | 0.200 | 8.286 | 8.970 | |
| B | PVSP | UL6 | BY | 3 | W Mean | 10.300 | 0.326 | 0.188 | 9.964 | 10.615 | 0.0002 * |
| B | PVSP | UL6 | BY | 3 | P Mean | 10.910 | 0.330 | 0.190 | 10.562 | 11.218 | |
| B | PVSP | UL6 | C | 3 | W Mean | 7.807 | 0.019 | 0.011 | 7.790 | 7.827 | 0.312 |
| B | PVSP | UL6 | C | 3 | P Mean | 7.437 | 0.491 | 0.283 | 6.873 | 7.767 | |
| B | PVSP | UL6 | D | 3 | W Mean | 8.143 | 0.141 | 0.081 | 8.013 | 8.293 | 0.2885 |
| B | PVSP | UL6 | D | 3 | P Mean | 8.065 | 0.076 | 0.044 | 8.003 | 8.150 | |
| B | PVSP | UR1 | AX | 3 | W Mean | 4.444 | 0.314 | 0.181 | 4.083 | 4.654 | 0.687 |
| B | PVSP | UR1 | AX | 3 | P Mean | 4.465 | 0.236 | 0.136 | 4.194 | 4.627 | |
| B | PVSP | UR1 | AY | 3 | W Mean | 13.313 | 0.092 | 0.053 | 13.220 | 13.403 | 0.3755 |
| B | PVSP | UR1 | AY | 3 | P Mean | 13.179 | 0.136 | 0.078 | 13.032 | 13.300 | |
| B | PVSP | UR1 | BX | 3 | W Mean | 6.011 | 0.346 | 0.200 | 5.612 | 6.232 | 0.333 |
| B | PVSP | UR1 | BX | 3 | P Mean | 6.068 | 0.269 | 0.15 | 5.758 | 6.249 | |

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| B | PVSP | UR1 | BY | 3 | W Mean | 13.285 | 0.054 | 0.031 | 13.251 | 13.347 | 0.4314 |
| B | PVSP | UR1 | BY | 3 | P Mean | 13.157 | 0.173 | 0.100 | 12.958 | 13.277 | |
| B | PVSP | UR1 | C | 3 | W Mean | 13.562 | 0.040 | 0.023 | 13.517 | 13.590 | 0.114 |
| B | PVSP | UR1 | C | 3 | P Mean | 13.393 | 0.148 | 0.085 | 13.223 | 13.493 | |
| B | PVSP | UR1 | D | 3 | W Mean | 13.749 | 0.042 | 0.024 | 13.717 | 13.797 | 0.076 |
| B | PVSP | UR1 | D | 3 | P Mean | 13.553 | 0.059 | 0.034 | 13.487 | 13.600 | |
| B | PVSP | UR2 | AX | 3 | W Mean | 10.307 | 0.304 | 0.176 | 10.105 | 10.657 | 0.225 |
| B | PVSP | UR2 | AX | 3 | P Mean | 10.492 | 0.120 | 0.070 | 10.422 | 10.631 | |
| B | PVSP | UR2 | AY | 3 | W Mean | 11.201 | 0.027 | 0.016 | 11.172 | 11.225 | 0.6576 |
| B | PVSP | UR2 | AY | 3 | P Mean | 11.284 | 0.284 | 0.164 | 10.992 | 11.560 | |
| B | PVSP | UR2 | BX | 3 | W Mean | 11.343 | 0.308 | 0.178 | 11.115 | 11.694 | 0.247 |
| B | PVSP | UR2 | BX | 3 | P Mean | 11.509 | 0.132 | 0.076 | 11.419 | 11.660 | |
| B | PVSP | UR2 | BY | 3 | W Mean | 11.228 | 0.085 | 0.049 | 11.174 | 11.326 | 0.7804 |
| B | PVSP | UR2 | BY | 3 | P Mean | 11.287 | 0.243 | 0.140 | 11.045 | 11.531 | |
| B | PVSP | UR2 | C | 3 | W Mean | 13.562 | 0.091 | 0.053 | 13.480 | 13.660 | 0.0307 * |
| B | PVSP | UR2 | C | 3 | P Mean | 13.390 | 0.038 | 0.022 | 13.360 | 13.433 | |
| B | PVSP | UR2 | D | 3 | W Mean | 13.432 | 0.065 | 0.037 | 13.393 | 13.507 | 0.0273 * |
| B | PVSP | UR2 | D | 3 | P Mean | 13.247 | 0.043 | 0.025 | 13.197 | 13.273 | |
| B | PVSP | UR3 | AX | 3 | W Mean | 6.138 | 0.236 | 0.136 | 5.906 | 6.378 | 0.262 |
| B | PVSP | UR3 | AX | 3 | P Mean | 6.286 | 0.336 | 0.194 | 5.899 | 6.506 | |
| B | PVSP | UR3 | AY | 3 | W Mean | 13.679 | 0.147 | 0.085 | 13.566 | 13.845 | 0.4388 |
| B | PVSP | UR3 | AY | 3 | P Mean | 13.796 | 0.352 | 0.203 | 13.465 | 14.166 | |
| B | PVSP | UR3 | BX | 3 | W Mean | 7.487 | 0.276 | 0.159 | 7.196 | 7.744 | 0.269 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| B | PVSP | UR3 | BX | 3 | P Mean | 7.618 | 0.384 | 0.222 | 7.177 | 7.876 | |
| B | PVSP | UR3 | BY | 3 | W Mean | 13.573 | 0.170 | 0.098 | 13.466 | 13.769 | 0.5336 |
| B | PVSP | UR3 | BY | 3 | P Mean | 13.663 | 0.354 | 0.204 | 13.351 | 14.047 | |
| B | PVSP | UR3 | C | 3 | W Mean | 11.773 | 0.039 | 0.022 | 11.733 | 11.810 | 0.0196 * |
| B | PVSP | UR3 | C | 3 | P Mean | 11.658 | 0.057 | 0.033 | 11.617 | 11.723 | |
| B | PVSP | UR3 | D | 3 | W Mean | 11.933 | 0.047 | 0.027 | 11.903 | 11.987 | 0.06 |
| B | PVSP | UR3 | D | 3 | P Mean | 11.818 | 0.059 | 0.034 | 11.750 | 11.853 | |
| B | PVSP | UR4 | AX | 3 | W Mean | 8.146 | 0.181 | 0.105 | 7.953 | 8.313 | 0.443 |
| B | PVSP | UR4 | AX | 3 | P Mean | 8.230 | 0.331 | 0.191 | 7.861 | 8.502 | |
| B | PVSP | UR4 | AY | 3 | W Mean | 11.933 | 0.194 | 0.112 | 11.726 | 12.111 | 0.2924 |
| B | PVSP | UR4 | AY | 3 | P Mean | 12.263 | 0.274 | 0.158 | 11.975 | 12.521 | |
| B | PVSP | UR4 | BX | 3 | W Mean | 9.474 | 0.268 | 0.155 | 9.175 | 9.693 | 0.557 |
| B | PVSP | UR4 | BX | 3 | P Mean | 9.535 | 0.417 | 0.241 | 9.063 | 9.855 | |
| B | PVSP | UR4 | BY | 3 | W Mean | 11.985 | 0.104 | 0.060 | 11.871 | 12.073 | 0.3177 |
| B | PVSP | UR4 | BY | 3 | P Mean | 12.273 | 0.311 | 0.179 | 11.925 | 12.524 | |
| B | PVSP | UR4 | C | 3 | W Mean | 9.472 | 0.108 | 0.062 | 9.353 | 9.563 | 0.0124 * |
| B | PVSP | UR4 | C | 3 | P Mean | 9.395 | 0.112 | 0.065 | 9.277 | 9.500 | |
| B | PVSP | UR4 | D | 3 | W Mean | 9.181 | 0.077 | 0.044 | 9.107 | 9.260 | 0.0022 * |
| B | PVSP | UR4 | D | 3 | P Mean | 9.138 | 0.075 | 0.043 | 9.067 | 9.217 | |
| B | PVSP | UR5 | AX | 3 | W Mean | 8.398 | 0.347 | 0.200 | 8.075 | 8.764 | 0.127 |
| B | PVSP | UR5 | AX | 3 | P Mean | 8.555 | 0.256 | 0.148 | 8.356 | 8.844 | |
| B | PVSP | UR5 | AY | 3 | W Mean | 10.713 | 0.217 | 0.125 | 10.576 | 10.963 | 0.4394 |
| B | PVSP | UR5 | AY | 3 | P Mean | 10.934 | 0.218 | 0.126 | 10.770 | 11.181 | |
| B | PVSP | UR5 | BX | 3 | W Mean | 9.664 | 0.283 | 0.16 | 9.382 | 9.948 | 0.273 |

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| | | | | | | | | 3 | | | |
| B | PVSP | UR5 | BX | 3 | P Mean | 9.768 | 0.199 | 0.115 | 9.624 | 9.995 | |
| B | PVSP | UR5 | BY | 3 | W Mean | 10.702 | 0.236 | 0.136 | 10.562 | 10.974 | 0.4174 |
| B | PVSP | UR5 | BY | 3 | P Mean | 10.937 | 0.213 | 0.123 | 10.787 | 11.181 | |
| B | PVSP | UR5 | C | 3 | W Mean | 9.801 | 0.040 | 0.023 | 9.760 | 9.840 | 0.175 |
| B | PVSP | UR5 | C | 3 | P Mean | 9.704 | 0.091 | 0.052 | 9.620 | 9.800 | |
| B | PVSP | UR5 | D | 3 | W Mean | 9.917 | 0.022 | 0.013 | 9.897 | 9.940 | 0.1279 |
| B | PVSP | UR5 | D | 3 | P Mean | 9.809 | 0.071 | 0.041 | 9.757 | 9.890 | |
| B | PVSP | UR6 | AX | 3 | W Mean | 5.278 | 0.345 | 0.199 | 4.961 | 5.646 | 0.142 |
| B | PVSP | UR6 | AX | 3 | P Mean | 5.408 | 0.419 | 0.242 | 5.075 | 5.879 | |
| B | PVSP | UR6 | AY | 3 | W Mean | 11.217 | 0.288 | 0.166 | 10.887 | 11.417 | 0.3064 |
| B | PVSP | UR6 | AY | 3 | P Mean | 11.335 | 0.338 | 0.195 | 11.009 | 11.684 | |
| B | PVSP | UR6 | BX | 3 | W Mean | 7.320 | 0.333 | 0.192 | 7.013 | 7.674 | 0.077 |
| B | PVSP | UR6 | BX | 3 | P Mean | 7.504 | 0.411 | 0.237 | 7.169 | 7.963 | |
| B | PVSP | UR6 | BY | 3 | W Mean | 11.156 | 0.119 | 0.069 | 11.019 | 11.230 | 0.4638 |
| B | PVSP | UR6 | BY | 3 | P Mean | 11.270 | 0.255 | 0.147 | 11.117 | 11.564 | |
| B | PVSP | UR6 | C | 3 | W Mean | 7.416 | 0.016 | 0.009 | 7.397 | 7.427 | 0.497 |
| B | PVSP | UR6 | C | 3 | P Mean | 7.337 | 0.151 | 0.087 | 7.177 | 7.477 | |
| B | PVSP | UR6 | D | 3 | W Mean | 8.130 | 0.416 | 0.240 | 7.843 | 8.607 | 0.4034 |
| B | PVSP | UR6 | D | 3 | P Mean | 7.786 | 0.180 | 0.104 | 7.610 | 7.970 | |
| C | DPVS | UL1 | AX | 3 | W Mean | -5.171 | 0.319 | 0.184 | -5.438 | -4.817 | 0.163 |
| C | DPVS | UL1 | AX | 3 | P Mean | -5.245 | 0.260 | 0.150 | -5.461 | -4.956 | |
| C | DPVS | UL1 | AY | 3 | W Mean | 11.736 | 0.557 | 0.322 | 11.208 | 12.319 | 0.2126 |
| C | DPVS | UL1 | AY | 3 | P Mean | 11.906 | 0.413 | 0.238 | 11.477 | 12.301 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| C | DPVS | UL1 | BX | 3 | W Mean | -3.616 | 0.290 | 0.168 | -3.837 | -3.287 | 0.057 |
| C | DPVS | UL1 | BX | 3 | P Mean | -3.714 | 0.270 | 0.156 | -3.949 | -3.420 | |
| C | DPVS | UL1 | BY | 3 | W Mean | 11.677 | 0.542 | 0.313 | 11.208 | 12.271 | 0.2463 |
| C | DPVS | UL1 | BY | 3 | P Mean | 11.860 | 0.371 | 0.214 | 11.488 | 12.229 | |
| C | DPVS | UL1 | C | 3 | W Mean | 13.017 | 0.035 | 0.020 | 12.977 | 13.040 | 0.346 |
| C | DPVS | UL1 | C | 3 | P Mean | 12.902 | 0.136 | 0.079 | 12.747 | 13.000 | |
| C | DPVS | UL1 | D | 3 | W Mean | 13.161 | 0.120 | 0.069 | 13.060 | 13.293 | 0.4114 |
| C | DPVS | UL1 | D | 3 | P Mean | 13.206 | 0.047 | 0.027 | 13.177 | 13.260 | |
| C | DPVS | UL2 | AX | 3 | W Mean | 5.975 | 0.229 | 0.132 | 5.719 | 6.159 | 0.165 |
| C | DPVS | UL2 | AX | 3 | P Mean | 5.910 | 0.188 | 0.108 | 5.694 | 6.034 | |
| C | DPVS | UL2 | AY | 3 | W Mean | 14.187 | 0.397 | 0.229 | 13.729 | 14.426 | 0.5255 |
| C | DPVS | UL2 | AY | 3 | P Mean | 14.316 | 0.642 | 0.371 | 13.617 | 14.880 | |
| C | DPVS | UL2 | BX | 3 | W Mean | 6.992 | 0.270 | 0.156 | 6.696 | 7.226 | 0.202 |
| C | DPVS | UL2 | BX | 3 | P Mean | 6.934 | 0.218 | 0.126 | 6.691 | 7.113 | |
| C | DPVS | UL2 | BY | 3 | W Mean | 14.296 | 0.323 | 0.187 | 13.924 | 14.504 | 0.4881 |
| C | DPVS | UL2 | BY | 3 | P Mean | 14.437 | 0.569 | 0.329 | 13.837 | 14.970 | |
| C | DPVS | UL2 | C | 3 | W Mean | 13.813 | 0.067 | 0.038 | 13.747 | 13.880 | 0.424 |
| C | DPVS | UL2 | C | 3 | P Mean | 13.756 | 0.037 | 0.021 | 13.713 | 13.777 | |
| C | DPVS | UL2 | D | 3 | W Mean | 13.566 | 0.173 | 0.100 | 13.383 | 13.727 | 0.7693 |
| C | DPVS | UL2 | D | 3 | P Mean | 13.537 | 0.113 | 0.065 | 13.433 | 13.657 | |
| C | DPVS | UL3 | AX | 3 | W Mean | 3.910 | 0.384 | 0.222 | 3.534 | 4.302 | 0.706 |
| C | DPVS | UL3 | AX | 3 | P Mean | 3.891 | 0.312 | 0.180 | 3.575 | 4.198 | |
| C | DPVS | UL3 | AY | 3 | W Mean | 13.847 | 0.330 | 0.191 | 13.592 | 14.220 | 0.3 |
| C | DPVS | UL3 | AY | 3 | P Mean | 13.93 | 0.378 | 0.21 | 13.56 | 14.32 | |

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| | | | | | | 2 | | 8 | 4 | 0 | |
| C | DPVS | UL3 | BX | 3 | W Mean | 5.130 | 0.469 | 0.271 | 4.667 | 5.605 | 0.456 |
| C | DPVS | UL3 | BX | 3 | P Mean | 5.078 | 0.373 | 0.215 | 4.699 | 5.445 | |
| C | DPVS | UL3 | BY | 3 | W Mean | 13.844 | 0.346 | 0.200 | 13.612 | 14.242 | 0.3281 |
| C | DPVS | UL3 | BY | 3 | P Mean | 13.912 | 0.378 | 0.218 | 13.582 | 14.324 | |
| C | DPVS | UL3 | C | 3 | W Mean | 11.688 | 0.160 | 0.092 | 11.560 | 11.867 | 0.166 |
| C | DPVS | UL3 | C | 3 | P Mean | 11.732 | 0.165 | 0.095 | 11.573 | 11.903 | |
| C | DPVS | UL3 | D | 3 | W Mean | 11.988 | 0.079 | 0.046 | 11.917 | 12.073 | 0.3756 |
| C | DPVS | UL3 | D | 3 | P Mean | 12.018 | 0.124 | 0.071 | 11.920 | 12.157 | |
| C | DPVS | UL4 | AX | 3 | W Mean | 5.111 | 0.176 | 0.101 | 4.909 | 5.226 | 0.263 |
| C | DPVS | UL4 | AX | 3 | P Mean | 5.032 | 0.150 | 0.087 | 4.890 | 5.189 | |
| C | DPVS | UL4 | AY | 3 | W Mean | 12.936 | 0.156 | 0.090 | 12.787 | 13.098 | 0.1908 |
| C | DPVS | UL4 | AY | 3 | P Mean | 13.120 | 0.290 | 0.167 | 12.952 | 13.455 | |
| C | DPVS | UL4 | BX | 3 | W Mean | 6.453 | 0.170 | 0.098 | 6.263 | 6.591 | 0.190 |
| C | DPVS | UL4 | BX | 3 | P Mean | 6.318 | 0.085 | 0.049 | 6.230 | 6.399 | |
| C | DPVS | UL4 | BY | 3 | W Mean | 12.848 | 0.112 | 0.065 | 12.719 | 12.922 | 0.1967 |
| C | DPVS | UL4 | BY | 3 | P Mean | 13.029 | 0.221 | 0.127 | 12.868 | 13.281 | |
| C | DPVS | UL4 | C | 3 | W Mean | 10.673 | 0.169 | 0.098 | 10.517 | 10.853 | 0.940 |
| C | DPVS | UL4 | C | 3 | P Mean | 10.678 | 0.106 | 0.061 | 10.610 | 10.800 | |
| C | DPVS | UL4 | D | 3 | W Mean | 10.390 | 0.174 | 0.100 | 10.277 | 10.590 | 0.6483 |
| C | DPVS | UL4 | D | 3 | P Mean | 10.402 | 0.179 | 0.104 | 10.273 | 10.607 | |
| C | DPVS | UL5 | AX | 3 | W Mean | 5.649 | 0.329 | 0.190 | 5.313 | 5.970 | 0.538 |
| C | DPVS | UL5 | AX | 2 | P Mean | 5.575 | 0.109 | 0.077 | 5.498 | 5.652 | |
| C | DPVS | UL5 | AY | 3 | W Mean | 13.629 | 0.282 | 0.163 | 13.441 | 13.953 | 0.4961 |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| C | DPVS | UL5 | AY | 2 | P Mean | 13.395 | 0.132 | 0.093 | 13.302 | 13.488 | |
| C | DPVS | UL5 | BX | 3 | W Mean | 6.979 | 0.331 | 0.191 | 6.638 | 7.300 | 0.475 |
| C | DPVS | UL5 | BX | 2 | P Mean | 6.859 | 0.203 | 0.144 | 6.715 | 7.002 | |
| C | DPVS | UL5 | BY | 3 | W Mean | 13.664 | 0.244 | 0.141 | 13.487 | 13.942 | 0.4732 |
| C | DPVS | UL5 | BY | 2 | P Mean | 13.369 | 0.128 | 0.091 | 13.278 | 13.459 | |
| C | DPVS | UL5 | C | 3 | W Mean | 9.625 | 0.102 | 0.059 | 9.547 | 9.740 | 0.124 |
| C | DPVS | UL5 | C | 2 | P Mean | 9.484 | 0.052 | 0.037 | 9.447 | 9.520 | |
| C | DPVS | UL5 | D | 3 | W Mean | 9.521 | 0.071 | 0.041 | 9.457 | 9.597 | 0.1695 |
| C | DPVS | UL5 | D | 2 | P Mean | 9.374 | 0.005 | 0.004 | 9.370 | 9.377 | |
| C | DPVS | UL6 | AX | 3 | W Mean | 5.823 | 0.076 | 0.044 | 5.758 | 5.906 | 0.099 |
| C | DPVS | UL6 | AX | 3 | P Mean | 5.732 | 0.129 | 0.075 | 5.624 | 5.875 | |
| C | DPVS | UL6 | AY | 3 | W Mean | 11.547 | 0.251 | 0.145 | 11.324 | 11.819 | 0.2582 |
| C | DPVS | UL6 | AY | 3 | P Mean | 11.736 | 0.317 | 0.183 | 11.451 | 12.077 | |
| C | DPVS | UL6 | BX | 3 | W Mean | 7.914 | 0.095 | 0.055 | 7.851 | 8.023 | 0.193 |
| C | DPVS | UL6 | BX | 3 | P Mean | 7.765 | 0.214 | 0.123 | 7.575 | 7.996 | |
| C | DPVS | UL6 | BY | 3 | W Mean | 11.620 | 0.434 | 0.251 | 11.295 | 12.113 | 0.3819 |
| C | DPVS | UL6 | BY | 3 | P Mean | 11.773 | 0.545 | 0.315 | 11.330 | 12.381 | |
| C | DPVS | UL6 | C | 3 | W Mean | 7.791 | 0.347 | 0.200 | 7.400 | 8.060 | 0.079 |
| C | DPVS | UL6 | C | 3 | P Mean | 7.695 | 0.309 | 0.178 | 7.340 | 7.907 | |
| C | DPVS | UL6 | D | 3 | W Mean | 8.048 | 0.085 | 0.049 | 7.953 | 8.117 | 0.4324 |
| C | DPVS | UL6 | D | 3 | P Mean | 8.022 | 0.095 | 0.055 | 7.943 | 8.127 | |
| C | DPVS | UR1 | AX | 3 | W Mean | 5.193 | 0.376 | 0.217 | 4.862 | 5.602 | 0.896 |
| C | DPVS | UR1 | AX | 3 | P Mean | 5.200 | 0.399 | 0.230 | 4.796 | 5.593 | |
| C | DPVS | UR1 | AY | 3 | W Mean | 13.09 | 0.162 | 0.09 | 12.99 | 13.28 | 0.7489 |

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| | | | | | | 5 | | 3 | 9 | 2 | |
| C | DPVS | UR1 | AY | 3 | P Mean | 13.157 | 0.206 | 0.119 | 12.989 | 13.387 | |
| C | DPVS | UR1 | BX | 3 | W Mean | 6.748 | 0.338 | 0.195 | 6.440 | 7.110 | 0.409 |
| C | DPVS | UR1 | BX | 3 | P Mean | 6.788 | 0.395 | 0.228 | 6.403 | 7.193 | |
| C | DPVS | UR1 | BY | 3 | W Mean | 13.134 | 0.176 | 0.102 | 13.027 | 13.338 | 0.6535 |
| C | DPVS | UR1 | BY | 3 | P Mean | 13.209 | 0.190 | 0.110 | 13.012 | 13.391 | |
| C | DPVS | UR1 | C | 3 | W Mean | 13.634 | 0.111 | 0.064 | 13.517 | 13.737 | 0.862 |
| C | DPVS | UR1 | C | 3 | P Mean | 13.645 | 0.043 | 0.025 | 13.610 | 13.693 | |
| C | DPVS | UR1 | D | 3 | W Mean | 13.668 | 0.048 | 0.028 | 13.613 | 13.703 | 0.5563 |
| C | DPVS | UR1 | D | 3 | P Mean | 13.686 | 0.022 | 0.013 | 13.667 | 13.710 | |
| C | DPVS | UR2 | AX | 3 | W Mean | 2.690 | 0.141 | 0.081 | 2.557 | 2.837 | 0.173 |
| C | DPVS | UR2 | AX | 3 | P Mean | 2.619 | 0.196 | 0.113 | 2.449 | 2.834 | |
| C | DPVS | UR2 | AY | 3 | W Mean | 13.055 | 0.218 | 0.126 | 12.888 | 13.302 | 0.3644 |
| C | DPVS | UR2 | AY | 3 | P Mean | 13.270 | 0.204 | 0.118 | 13.058 | 13.466 | |
| C | DPVS | UR2 | BX | 3 | W Mean | 3.701 | 0.162 | 0.094 | 3.579 | 3.885 | 0.119 |
| C | DPVS | UR2 | BX | 3 | P Mean | 3.621 | 0.210 | 0.121 | 3.442 | 3.852 | |
| C | DPVS | UR2 | BY | 3 | W Mean | 13.101 | 0.216 | 0.124 | 12.921 | 13.340 | 0.3815 |
| C | DPVS | UR2 | BY | 3 | P Mean | 13.309 | 0.193 | 0.111 | 13.112 | 13.497 | |
| C | DPVS | UR2 | C | 3 | W Mean | 13.607 | 0.135 | 0.078 | 13.467 | 13.737 | 0.636 |
| C | DPVS | UR2 | C | 3 | P Mean | 13.539 | 0.122 | 0.071 | 13.423 | 13.667 | |
| C | DPVS | UR2 | D | 3 | W Mean | 13.621 | 0.065 | 0.037 | 13.547 | 13.667 | 0.0421 * |
| C | DPVS | UR2 | D | 3 | P Mean | 13.534 | 0.050 | 0.029 | 13.487 | 13.587 | |
| C | DPVS | UR3 | AX | 3 | W Mean | 5.821 | 0.348 | 0.201 | 5.516 | 6.201 | 0.816 |
| C | DPVS | UR3 | AX | 3 | P Mean | 5.832 | 0.417 | 0.241 | 5.484 | 6.295 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| C | DPVS | UR3 | AY | 3 | W Mean | 13.031 | 0.588 | 0.340 | 12.361 | 13.462 | 0.0226* |
| C | DPVS | UR3 | AY | 3 | P Mean | 12.884 | 0.586 | 0.338 | 12.211 | 13.277 | |
| C | DPVS | UR3 | BX | 3 | W Mean | 7.158 | 0.270 | 0.156 | 6.908 | 7.445 | 0.927 |
| C | DPVS | UR3 | BX | 3 | P Mean | 7.162 | 0.332 | 0.192 | 6.858 | 7.516 | |
| C | DPVS | UR3 | BY | 3 | W Mean | 12.957 | 0.582 | 0.336 | 12.290 | 13.366 | 0.028* |
| C | DPVS | UR3 | BY | 3 | P Mean | 12.832 | 0.567 | 0.327 | 12.179 | 13.199 | |
| C | DPVS | UR3 | C | 3 | W Mean | 11.964 | 0.136 | 0.078 | 11.847 | 12.113 | 0.0193* |
| C | DPVS | UR3 | C | 3 | P Mean | 11.753 | 0.136 | 0.078 | 11.667 | 11.910 | |
| C | DPVS | UR3 | D | 3 | W Mean | 12.172 | 0.110 | 0.063 | 12.090 | 12.297 | 0.0695 |
| C | DPVS | UR3 | D | 3 | P Mean | 12.067 | 0.071 | 0.041 | 12.013 | 12.147 | |
| C | DPVS | UR4 | AX | 3 | W Mean | 9.141 | 0.237 | 0.137 | 8.934 | 9.400 | 0.404 |
| C | DPVS | UR4 | AX | 3 | P Mean | 9.204 | 0.341 | 0.197 | 8.910 | 9.578 | |
| C | DPVS | UR4 | AY | 3 | W Mean | 10.740 | 0.583 | 0.337 | 10.386 | 11.413 | 0.7316 |
| C | DPVS | UR4 | AY | 3 | P Mean | 10.646 | 0.182 | 0.105 | 10.490 | 10.846 | |
| C | DPVS | UR4 | BX | 3 | W Mean | 10.375 | 0.178 | 0.102 | 10.263 | 10.580 | 0.995 |
| C | DPVS | UR4 | BX | 3 | P Mean | 10.375 | 0.331 | 0.191 | 10.091 | 10.738 | |
| C | DPVS | UR4 | BY | 3 | W Mean | 10.682 | 0.644 | 0.372 | 10.287 | 11.426 | 0.6963 |
| C | DPVS | UR4 | BY | 3 | P Mean | 10.570 | 0.219 | 0.127 | 10.415 | 10.821 | |
| C | DPVS | UR4 | C | 3 | W Mean | 8.932 | 0.221 | 0.128 | 8.727 | 9.167 | 0.622 |
| C | DPVS | UR4 | C | 3 | P Mean | 8.841 | 0.140 | 0.081 | 8.683 | 8.950 | |
| C | DPVS | UR4 | D | 3 | W Mean | 9.047 | 0.238 | 0.137 | 8.787 | 9.253 | 0.2456 |
| C | DPVS | UR4 | D | 3 | P Mean | 8.865 | 0.077 | 0.044 | 8.787 | 8.940 | |
| C | DPVS | UR5 | AX | 3 | W Mean | 5.547 | 0.460 | 0.266 | 5.040 | 5.939 | 0.309 |
| C | DPVS | UR5 | AX | 3 | P Mean | 5.601 | 0.471 | 0.27 | 5.111 | 6.051 | |

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| C | DPVS | UR5 | AY | 3 | W Mean | 12.473 | 0.104 | 0.060 | 12.353 | 12.537 | 0.8716 |
| C | DPVS | UR5 | AY | 3 | P Mean | 12.461 | 0.043 | 0.025 | 12.418 | 12.504 | |
| C | DPVS | UR5 | BX | 3 | W Mean | 6.765 | 0.463 | 0.267 | 6.244 | 7.130 | 0.315 |
| C | DPVS | UR5 | BX | 3 | P Mean | 6.823 | 0.453 | 0.262 | 6.339 | 7.238 | |
| C | DPVS | UR5 | BY | 3 | W Mean | 12.498 | 0.055 | 0.032 | 12.434 | 12.531 | 0.6654 |
| C | DPVS | UR5 | BY | 3 | P Mean | 12.470 | 0.044 | 0.025 | 12.429 | 12.516 | |
| C | DPVS | UR5 | C | 3 | W Mean | 9.809 | 0.152 | 0.088 | 9.673 | 9.973 | 0.372 |
| C | DPVS | UR5 | C | 3 | P Mean | 9.710 | 0.100 | 0.058 | 9.610 | 9.810 | |
| C | DPVS | UR5 | D | 3 | W Mean | 9.831 | 0.153 | 0.088 | 9.677 | 9.983 | 0.305 |
| C | DPVS | UR5 | D | 3 | P Mean | 9.727 | 0.108 | 0.062 | 9.617 | 9.833 | |
| C | DPVS | UR6 | AX | 3 | W Mean | 6.322 | 0.324 | 0.187 | 6.104 | 6.695 | 0.706 |
| C | DPVS | UR6 | AX | 3 | P Mean | 6.300 | 0.234 | 0.135 | 6.144 | 6.569 | |
| C | DPVS | UR6 | AY | 3 | W Mean | 8.735 | 0.170 | 0.098 | 8.541 | 8.860 | 0.3191 |
| C | DPVS | UR6 | AY | 3 | P Mean | 8.868 | 0.268 | 0.155 | 8.668 | 9.173 | |
| C | DPVS | UR6 | BX | 3 | W Mean | 8.367 | 0.293 | 0.169 | 8.159 | 8.702 | 0.310 |
| C | DPVS | UR6 | BX | 3 | P Mean | 8.414 | 0.248 | 0.143 | 8.207 | 8.688 | |
| C | DPVS | UR6 | BY | 3 | W Mean | 8.823 | 0.218 | 0.126 | 8.572 | 8.970 | 0.1842 |
| C | DPVS | UR6 | BY | 3 | P Mean | 8.975 | 0.255 | 0.147 | 8.739 | 9.245 | |
| C | DPVS | UR6 | C | 3 | W Mean | 7.594 | 0.078 | 0.045 | 7.517 | 7.673 | 0.715 |
| C | DPVS | UR6 | C | 3 | P Mean | 7.616 | 0.010 | 0.006 | 7.607 | 7.627 | |
| C | DPVS | UR6 | D | 3 | W Mean | 8.172 | 0.047 | 0.027 | 8.130 | 8.223 | 0.8845 |
| C | DPVS | UR6 | D | 3 | P Mean | 8.179 | 0.058 | 0.034 | 8.130 | 8.243 | |
| C | DVF | UL1 | AX | 3 | W Mean | -5.080 | 0.208 | 0.120 | -5.317 | -4.924 | 0.0469 * |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| C | DVF | UL1 | AX | 3 | P Mean | -5.225 | 0.154 | 0.089 | -5.397 | -5.098 | |
| C | DVF | UL1 | AY | 3 | W Mean | 12.072 | 0.049 | 0.028 | 12.030 | 12.126 | 0.5911 |
| C | DVF | UL1 | AY | 3 | P Mean | 12.048 | 0.045 | 0.026 | 12.014 | 12.099 | |
| C | DVF | UL1 | BX | 3 | W Mean | -3.548 | 0.251 | 0.145 | -3.835 | -3.369 | 0.113 |
| C | DVF | UL1 | BX | 3 | P Mean | -3.647 | 0.202 | 0.116 | -3.868 | -3.473 | |
| C | DVF | UL1 | BY | 3 | W Mean | 11.990 | 0.113 | 0.065 | 11.872 | 12.098 | 0.8215 |
| C | DVF | UL1 | BY | 3 | P Mean | 11.986 | 0.082 | 0.047 | 11.899 | 12.062 | |
| C | DVF | UL1 | C | 3 | W Mean | 12.968 | 0.047 | 0.027 | 12.917 | 13.010 | 0.995 |
| C | DVF | UL1 | C | 3 | P Mean | 12.968 | 0.103 | 0.060 | 12.883 | 13.083 | |
| C | DVF | UL1 | D | 3 | W Mean | 13.287 | 0.019 | 0.011 | 13.270 | 13.307 | 0.1084 |
| C | DVF | UL1 | D | 3 | P Mean | 13.214 | 0.064 | 0.037 | 13.153 | 13.280 | |
| C | DVF | UL2 | AX | 3 | W Mean | 6.169 | 0.414 | 0.239 | 5.856 | 6.639 | 0.141 |
| C | DVF | UL2 | AX | 3 | P Mean | 6.116 | 0.453 | 0.262 | 5.768 | 6.628 | |
| C | DVF | UL2 | AY | 3 | W Mean | 14.237 | 0.082 | 0.047 | 14.146 | 14.305 | 0.15 |
| C | DVF | UL2 | AY | 3 | P Mean | 14.293 | 0.080 | 0.046 | 14.229 | 14.383 | |
| C | DVF | UL2 | BX | 3 | W Mean | 7.147 | 0.419 | 0.242 | 6.815 | 7.618 | 0.606 |
| C | DVF | UL2 | BX | 3 | P Mean | 7.133 | 0.430 | 0.248 | 6.760 | 7.603 | |
| C | DVF | UL2 | BY | 3 | W Mean | 14.231 | 0.112 | 0.065 | 14.139 | 14.356 | 0.272 |
| C | DVF | UL2 | BY | 3 | P Mean | 14.289 | 0.135 | 0.078 | 14.181 | 14.440 | |
| C | DVF | UL2 | C | 3 | W Mean | 13.866 | 0.019 | 0.011 | 13.853 | 13.887 | 0.180 |
| C | DVF | UL2 | C | 3 | P Mean | 13.765 | 0.094 | 0.054 | 13.657 | 13.830 | |
| C | DVF | UL2 | D | 3 | W Mean | 13.572 | 0.033 | 0.019 | 13.550 | 13.610 | 0.0047 * |
| C | DVF | UL2 | D | 3 | P Mean | 13.469 | 0.021 | 0.012 | 13.457 | 13.493 | |
| C | DVF | UL3 | AX | 3 | W Mean | 3.891 | 0.211 | 0.12 | 3.750 | 4.134 | 0.410 |

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| | | | | | | | | 2 | | | |
| C | DVF | UL3 | AX | 3 | P Mean | 3.807 | 0.135 | 0.078 | 3.666 | 3.934 | |
| C | DVF | UL3 | AY | 3 | W Mean | 13.700 | 0.248 | 0.143 | 13.468 | 13.961 | 0.6343 |
| C | DVF | UL3 | AY | 3 | P Mean | 13.783 | 0.057 | 0.033 | 13.748 | 13.849 | |
| C | DVF | UL3 | BX | 3 | W Mean | 5.135 | 0.252 | 0.146 | 4.972 | 5.425 | 0.428 |
| C | DVF | UL3 | BX | 3 | P Mean | 5.063 | 0.193 | 0.111 | 4.881 | 5.265 | |
| C | DVF | UL3 | BY | 3 | W Mean | 13.648 | 0.240 | 0.139 | 13.424 | 13.902 | 0.5567 |
| C | DVF | UL3 | BY | 3 | P Mean | 13.751 | 0.066 | 0.038 | 13.712 | 13.828 | |
| C | DVF | UL3 | C | 3 | W Mean | 11.890 | 0.057 | 0.033 | 11.830 | 11.943 | 0.956 |
| C | DVF | UL3 | C | 3 | P Mean | 11.893 | 0.148 | 0.085 | 11.727 | 12.010 | |
| C | DVF | UL3 | D | 3 | W Mean | 12.060 | 0.025 | 0.015 | 12.033 | 12.083 | 0.9464 |
| C | DVF | UL3 | D | 3 | P Mean | 12.054 | 0.098 | 0.057 | 11.943 | 12.130 | |
| C | DVF | UL4 | AX | 3 | W Mean | 4.813 | 0.083 | 0.048 | 4.744 | 4.905 | 0.068 |
| C | DVF | UL4 | AX | 3 | P Mean | 4.710 | 0.042 | 0.024 | 4.678 | 4.758 | |
| C | DVF | UL4 | AY | 3 | W Mean | 13.517 | 0.202 | 0.116 | 13.284 | 13.640 | 0.8099 |
| C | DVF | UL4 | AY | 3 | P Mean | 13.452 | 0.216 | 0.125 | 13.250 | 13.680 | |
| C | DVF | UL4 | BX | 3 | W Mean | 6.127 | 0.108 | 0.063 | 6.058 | 6.252 | 0.077 |
| C | DVF | UL4 | BX | 3 | P Mean | 6.021 | 0.070 | 0.040 | 5.952 | 6.092 | |
| C | DVF | UL4 | BY | 3 | W Mean | 13.433 | 0.258 | 0.149 | 13.137 | 13.609 | 0.818 |
| C | DVF | UL4 | BY | 3 | P Mean | 13.372 | 0.145 | 0.083 | 13.256 | 13.534 | |
| C | DVF | UL4 | C | 3 | W Mean | 10.770 | 0.065 | 0.038 | 10.717 | 10.843 | 0.865 |
| C | DVF | UL4 | C | 3 | P Mean | 10.747 | 0.147 | 0.085 | 10.577 | 10.843 | |
| C | DVF | UL4 | D | 3 | W Mean | 10.530 | 0.054 | 0.031 | 10.487 | 10.590 | 0.8831 |
| C | DVF | UL4 | D | 3 | P Mean | 10.550 | 0.156 | 0.090 | 10.370 | 10.643 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| C | DVF | UL5 | AX | 3 | W Mean | 5.591 | 0.202 | 0.117 | 5.461 | 5.824 | 0.0301 * |
| C | DVF | UL5 | AX | 3 | P Mean | 5.381 | 0.183 | 0.106 | 5.232 | 5.585 | |
| C | DVF | UL5 | AY | 3 | W Mean | 13.398 | 0.259 | 0.150 | 13.161 | 13.675 | 0.3136 |
| C | DVF | UL5 | AY | 3 | P Mean | 13.584 | 0.071 | 0.041 | 13.505 | 13.641 | |
| C | DVF | UL5 | BX | 3 | W Mean | 6.833 | 0.261 | 0.150 | 6.666 | 7.133 | 0.0439 * |
| C | DVF | UL5 | BX | 3 | P Mean | 6.621 | 0.253 | 0.146 | 6.418 | 6.905 | |
| C | DVF | UL5 | BY | 3 | W Mean | 13.438 | 0.161 | 0.093 | 13.294 | 13.611 | 0.3091 |
| C | DVF | UL5 | BY | 3 | P Mean | 13.622 | 0.112 | 0.065 | 13.521 | 13.742 | |
| C | DVF | UL5 | C | 3 | W Mean | 9.641 | 0.040 | 0.023 | 9.613 | 9.687 | 0.680 |
| C | DVF | UL5 | C | 3 | P Mean | 9.595 | 0.128 | 0.074 | 9.447 | 9.680 | |
| C | DVF | UL5 | D | 3 | W Mean | 9.484 | 0.048 | 0.027 | 9.433 | 9.527 | 0.9715 |
| C | DVF | UL5 | D | 3 | P Mean | 9.488 | 0.130 | 0.075 | 9.350 | 9.607 | |
| C | DVF | UL6 | AX | 3 | W Mean | 5.814 | 0.186 | 0.107 | 5.617 | 5.987 | 0.216 |
| C | DVF | UL6 | AX | 2 | P Mean | 5.711 | 0.165 | 0.117 | 5.594 | 5.827 | |
| C | DVF | UL6 | AY | 3 | W Mean | 11.776 | 0.183 | 0.105 | 11.567 | 11.905 | 0.9495 |
| C | DVF | UL6 | AY | 2 | P Mean | 11.746 | 0.070 | 0.050 | 11.696 | 11.795 | |
| C | DVF | UL6 | BX | 3 | W Mean | 7.906 | 0.219 | 0.127 | 7.674 | 8.110 | 0.683 |
| C | DVF | UL6 | BX | 2 | P Mean | 7.833 | 0.110 | 0.078 | 7.755 | 7.910 | |
| C | DVF | UL6 | BY | 3 | W Mean | 11.877 | 0.139 | 0.080 | 11.742 | 12.020 | 0.9675 |
| C | DVF | UL6 | BY | 2 | P Mean | 11.887 | 0.045 | 0.032 | 11.855 | 11.918 | |
| C | DVF | UL6 | C | 3 | W Mean | 8.027 | 0.034 | 0.019 | 7.993 | 8.060 | 0.542 |
| C | DVF | UL6 | C | 2 | P Mean | 7.922 | 0.219 | 0.155 | 7.767 | 8.077 | |
| C | DVF | UL6 | D | 3 | W Mean | 8.063 | 0.055 | 0.032 | 8.010 | 8.120 | 0.312 |
| C | DVF | UL6 | D | 2 | P Mean | 7.864 | 0.094 | 0.06 | 7.797 | 7.930 | |

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| C | DVF | UR1 | AX | 3 | W Mean | 5.278 | 0.104 | 0.060 | 5.171 | 5.378 | 0.610 |
| C | DVF | UR1 | AX | 3 | P Mean | 5.302 | 0.165 | 0.095 | 5.116 | 5.430 | |
| C | DVF | UR1 | AY | 3 | W Mean | 13.532 | 0.290 | 0.167 | 13.201 | 13.741 | 0.1543 |
| C | DVF | UR1 | AY | 3 | P Mean | 13.377 | 0.294 | 0.170 | 13.049 | 13.617 | |
| C | DVF | UR1 | BX | 3 | W Mean | 6.873 | 0.105 | 0.060 | 6.771 | 6.980 | 0.672 |
| C | DVF | UR1 | BX | 3 | P Mean | 6.895 | 0.164 | 0.095 | 6.709 | 7.017 | |
| C | DVF | UR1 | BY | 3 | W Mean | 13.504 | 0.296 | 0.171 | 13.163 | 13.677 | 0.1316 |
| C | DVF | UR1 | BY | 3 | P Mean | 13.358 | 0.324 | 0.187 | 13.004 | 13.639 | |
| C | DVF | UR1 | C | 3 | W Mean | 13.682 | 0.027 | 0.015 | 13.667 | 13.713 | 0.962 |
| C | DVF | UR1 | C | 3 | P Mean | 13.679 | 0.119 | 0.069 | 13.553 | 13.790 | |
| C | DVF | UR1 | D | 3 | W Mean | 13.773 | 0.022 | 0.013 | 13.750 | 13.793 | 0.359 |
| C | DVF | UR1 | D | 3 | P Mean | 13.708 | 0.109 | 0.063 | 13.623 | 13.830 | |
| C | DVF | UR2 | AX | 3 | W Mean | 2.837 | 0.226 | 0.130 | 2.664 | 3.092 | 0.169 |
| C | DVF | UR2 | AX | 3 | P Mean | 2.797 | 0.195 | 0.112 | 2.656 | 3.019 | |
| C | DVF | UR2 | AY | 3 | W Mean | 13.230 | 0.171 | 0.099 | 13.035 | 13.354 | 0.9908 |
| C | DVF | UR2 | AY | 3 | P Mean | 13.228 | 0.262 | 0.151 | 13.048 | 13.528 | |
| C | DVF | UR2 | BX | 3 | W Mean | 3.851 | 0.240 | 0.138 | 3.694 | 4.127 | 0.534 |
| C | DVF | UR2 | BX | 3 | P Mean | 3.833 | 0.197 | 0.114 | 3.706 | 4.060 | |
| C | DVF | UR2 | BY | 3 | W Mean | 13.260 | 0.193 | 0.111 | 13.037 | 13.376 | 0.9925 |
| C | DVF | UR2 | BY | 3 | P Mean | 13.258 | 0.234 | 0.135 | 13.117 | 13.529 | |
| C | DVF | UR2 | C | 3 | W Mean | 13.713 | 0.047 | 0.027 | 13.680 | 13.767 | 0.751 |
| C | DVF | UR2 | C | 3 | P Mean | 13.678 | 0.209 | 0.121 | 13.490 | 13.903 | |
| C | DVF | UR2 | D | 3 | W Mean | 13.543 | 0.127 | 0.073 | 13.400 | 13.640 | 0.595 |

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| C | DVF | UR2 | D | 3 | P Mean | 13.479 | 0.204 | 0.118 | 13.323 | 13.710 | |
| C | DVF | UR3 | AX | 3 | W Mean | 5.718 | 0.070 | 0.040 | 5.646 | 5.785 | 0.848 |
| C | DVF | UR3 | AX | 3 | P Mean | 5.727 | 0.049 | 0.028 | 5.690 | 5.782 | |
| C | DVF | UR3 | AY | 3 | W Mean | 13.178 | 0.424 | 0.245 | 12.728 | 13.569 | 0.9515 |
| C | DVF | UR3 | AY | 3 | P Mean | 13.159 | 0.381 | 0.220 | 12.874 | 13.592 | |
| C | DVF | UR3 | BX | 3 | W Mean | 7.083 | 0.061 | 0.035 | 7.022 | 7.144 | 0.805 |
| C | DVF | UR3 | BX | 3 | P Mean | 7.097 | 0.062 | 0.036 | 7.060 | 7.169 | |
| C | DVF | UR3 | BY | 3 | W Mean | 13.142 | 0.405 | 0.234 | 12.694 | 13.481 | 0.9777 |
| C | DVF | UR3 | BY | 3 | P Mean | 13.134 | 0.394 | 0.228 | 12.843 | 13.583 | |
| C | DVF | UR3 | C | 3 | W Mean | 11.846 | 0.062 | 0.036 | 11.777 | 11.897 | 0.841 |
| C | DVF | UR3 | C | 3 | P Mean | 11.856 | 0.071 | 0.041 | 11.807 | 11.937 | |
| C | DVF | UR3 | D | 3 | W Mean | 12.081 | 0.026 | 0.015 | 12.053 | 12.103 | 0.6533 |
| C | DVF | UR3 | D | 3 | P Mean | 12.062 | 0.079 | 0.045 | 12.017 | 12.153 | |
| C | DVF | UR4 | AX | 3 | W Mean | 8.946 | 0.148 | 0.085 | 8.826 | 9.111 | 0.644 |
| C | DVF | UR4 | AX | 3 | P Mean | 8.881 | 0.310 | 0.179 | 8.528 | 9.108 | |
| C | DVF | UR4 | AY | 3 | W Mean | 10.740 | 0.373 | 0.215 | 10.332 | 11.063 | 0.8055 |
| C | DVF | UR4 | AY | 3 | P Mean | 10.778 | 0.214 | 0.124 | 10.540 | 10.955 | |
| C | DVF | UR4 | BX | 3 | W Mean | 10.117 | 0.132 | 0.076 | 9.991 | 10.254 | 0.656 |
| C | DVF | UR4 | BX | 3 | P Mean | 10.058 | 0.307 | 0.177 | 9.707 | 10.279 | |
| C | DVF | UR4 | BY | 3 | W Mean | 10.700 | 0.414 | 0.239 | 10.226 | 10.990 | 0.8931 |
| C | DVF | UR4 | BY | 3 | P Mean | 10.720 | 0.294 | 0.170 | 10.414 | 11.000 | |
| C | DVF | UR4 | C | 3 | W Mean | 9.012 | 0.050 | 0.029 | 8.983 | 9.070 | 0.980 |
| C | DVF | UR4 | C | 3 | P Mean | 9.014 | 0.158 | 0.091 | 8.833 | 9.120 | |
| C | DVF | UR4 | D | 3 | W Mean | 9.056 | 0.078 | 0.04 | 8.967 | 9.113 | 0.5769 |

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| C | DVF | UR4 | D | 3 | P Mean | 8.994 | 0.101 | 0.058 | 8.883 | 9.080 | |
| C | DVF | UR5 | AX | 3 | W Mean | 5.877 | 0.203 | 0.117 | 5.729 | 6.108 | 0.858 |
| C | DVF | UR5 | AX | 3 | P Mean | 5.860 | 0.288 | 0.166 | 5.613 | 6.176 | |
| C | DVF | UR5 | AY | 3 | W Mean | 12.958 | 0.608 | 0.351 | 12.265 | 13.403 | 0.9578 |
| C | DVF | UR5 | AY | 3 | P Mean | 12.970 | 0.316 | 0.182 | 12.619 | 13.230 | |
| C | DVF | UR5 | BX | 3 | W Mean | 7.093 | 0.178 | 0.103 | 6.950 | 7.293 | 0.878 |
| C | DVF | UR5 | BX | 3 | P Mean | 7.076 | 0.265 | 0.153 | 6.829 | 7.356 | |
| C | DVF | UR5 | BY | 3 | W Mean | 12.955 | 0.581 | 0.335 | 12.291 | 13.370 | 0.9666 |
| C | DVF | UR5 | BY | 3 | P Mean | 12.964 | 0.292 | 0.168 | 12.637 | 13.198 | |
| C | DVF | UR5 | C | 3 | W Mean | 9.728 | 0.084 | 0.048 | 9.640 | 9.807 | 0.0019 * |
| C | DVF | UR5 | C | 3 | P Mean | 9.817 | 0.088 | 0.051 | 9.727 | 9.903 | |
| C | DVF | UR5 | D | 3 | W Mean | 9.782 | 0.122 | 0.071 | 9.710 | 9.923 | 0.0308 * |
| C | DVF | UR5 | D | 3 | P Mean | 9.851 | 0.110 | 0.064 | 9.770 | 9.977 | |
| C | DVF | UR6 | AX | 3 | W Mean | 5.924 | 0.084 | 0.048 | 5.865 | 6.020 | 0.283 |
| C | DVF | UR6 | AX | 3 | P Mean | 5.814 | 0.201 | 0.116 | 5.605 | 6.006 | |
| C | DVF | UR6 | AY | 3 | W Mean | 8.993 | 0.136 | 0.078 | 8.845 | 9.111 | 0.7611 |
| C | DVF | UR6 | AY | 3 | P Mean | 9.067 | 0.459 | 0.265 | 8.577 | 9.487 | |
| C | DVF | UR6 | BX | 3 | W Mean | 7.970 | 0.107 | 0.062 | 7.869 | 8.082 | 0.886 |
| C | DVF | UR6 | BX | 3 | P Mean | 7.961 | 0.190 | 0.110 | 7.754 | 8.127 | |
| C | DVF | UR6 | BY | 3 | W Mean | 9.026 | 0.181 | 0.104 | 8.855 | 9.215 | 0.6083 |
| C | DVF | UR6 | BY | 3 | P Mean | 9.144 | 0.428 | 0.247 | 8.664 | 9.487 | |
| C | DVF | UR6 | C | 3 | W Mean | 7.605 | 0.097 | 0.056 | 7.547 | 7.717 | 0.736 |
| C | DVF | UR6 | C | 3 | P Mean | 7.650 | 0.113 | 0.065 | 7.537 | 7.763 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| C | DVF | UR6 | D | 3 | W Mean | 8.036 | 0.274 | 0.158 | 7.720 | 8.210 | 0.4494 |
| C | DVF | UR6 | D | 3 | P Mean | 8.288 | 0.213 | 0.123 | 8.063 | 8.487 | |
| C | PVSP | UL1 | AX | 3 | W Mean | -4.924 | 0.198 | 0.114 | -5.095 | -4.707 | 0.871 |
| C | PVSP | UL1 | AX | 3 | P Mean | -4.937 | 0.076 | 0.044 | -4.994 | -4.850 | |
| C | PVSP | UL1 | AY | 3 | W Mean | 11.961 | 0.212 | 0.122 | 11.750 | 12.174 | 0.4691 |
| C | PVSP | UL1 | AY | 3 | P Mean | 11.815 | 0.284 | 0.164 | 11.558 | 12.120 | |
| C | PVSP | UL1 | BX | 3 | W Mean | -3.371 | 0.209 | 0.121 | -3.585 | -3.168 | 0.695 |
| C | PVSP | UL1 | BX | 3 | P Mean | -3.404 | 0.085 | 0.049 | -3.486 | -3.317 | |
| C | PVSP | UL1 | BY | 3 | W Mean | 11.934 | 0.221 | 0.127 | 11.708 | 12.149 | 0.5126 |
| C | PVSP | UL1 | BY | 3 | P Mean | 11.805 | 0.290 | 0.167 | 11.542 | 12.116 | |
| C | PVSP | UL1 | C | 3 | W Mean | 13.060 | 0.065 | 0.038 | 12.993 | 13.123 | 0.324 |
| C | PVSP | UL1 | C | 3 | P Mean | 13.024 | 0.052 | 0.030 | 12.983 | 13.083 | |
| C | PVSP | UL1 | D | 3 | W Mean | 13.283 | 0.050 | 0.029 | 13.233 | 13.333 | 0.4691 |
| C | PVSP | UL1 | D | 3 | P Mean | 13.248 | 0.114 | 0.066 | 13.160 | 13.377 | |
| C | PVSP | UL2 | AX | 3 | W Mean | 6.211 | 0.073 | 0.042 | 6.128 | 6.264 | 0.542 |
| C | PVSP | UL2 | AX | 3 | P Mean | 6.243 | 0.147 | 0.085 | 6.073 | 6.329 | |
| C | PVSP | UL2 | AY | 3 | W Mean | 14.391 | 0.091 | 0.053 | 14.306 | 14.487 | 0.9487 |
| C | PVSP | UL2 | AY | 3 | P Mean | 14.402 | 0.174 | 0.101 | 14.254 | 14.594 | |
| C | PVSP | UL2 | BX | 3 | W Mean | 7.292 | 0.071 | 0.041 | 7.217 | 7.359 | 0.750 |
| C | PVSP | UL2 | BX | 3 | P Mean | 7.276 | 0.143 | 0.083 | 7.111 | 7.371 | |
| C | PVSP | UL2 | BY | 3 | W Mean | 14.400 | 0.062 | 0.036 | 14.355 | 14.471 | 1 |
| C | PVSP | UL2 | BY | 3 | P Mean | 14.400 | 0.228 | 0.132 | 14.217 | 14.656 | |
| C | PVSP | UL2 | C | 3 | W Mean | 13.881 | 0.017 | 0.010 | 13.863 | 13.897 | 0.077 |
| C | PVSP | UL2 | C | 3 | P Mean | 13.83 | 0.014 | 0.00 | 13.81 | 13.84 | |

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| C | PVSP | UL2 | D | 3 | W Mean | 13.638 | 0.045 | 0.026 | 13.587 | 13.673 | 0.0841 |
| C | PVSP | UL2 | D | 3 | P Mean | 13.593 | 0.066 | 0.038 | 13.517 | 13.633 | |
| C | PVSP | UL3 | AX | 3 | W Mean | 4.244 | 0.190 | 0.110 | 4.097 | 4.459 | 0.077 |
| C | PVSP | UL3 | AX | 3 | P Mean | 4.155 | 0.174 | 0.101 | 3.990 | 4.337 | |
| C | PVSP | UL3 | AY | 3 | W Mean | 13.935 | 0.216 | 0.125 | 13.685 | 14.070 | 0.3814 |
| C | PVSP | UL3 | AY | 3 | P Mean | 13.882 | 0.161 | 0.093 | 13.709 | 14.027 | |
| C | PVSP | UL3 | BX | 3 | W Mean | 5.499 | 0.206 | 0.119 | 5.346 | 5.733 | 0.076 |
| C | PVSP | UL3 | BX | 3 | P Mean | 5.388 | 0.192 | 0.111 | 5.205 | 5.588 | |
| C | PVSP | UL3 | BY | 3 | W Mean | 13.835 | 0.217 | 0.125 | 13.585 | 13.961 | 0.4722 |
| C | PVSP | UL3 | BY | 3 | P Mean | 13.786 | 0.135 | 0.078 | 13.637 | 13.900 | |
| C | PVSP | UL3 | C | 3 | W Mean | 11.778 | 0.055 | 0.032 | 11.737 | 11.840 | 0.822 |
| C | PVSP | UL3 | C | 3 | P Mean | 11.768 | 0.068 | 0.039 | 11.693 | 11.827 | |
| C | PVSP | UL3 | D | 3 | W Mean | 12.092 | 0.034 | 0.020 | 12.053 | 12.113 | 0.4601 |
| C | PVSP | UL3 | D | 3 | P Mean | 12.041 | 0.106 | 0.061 | 11.973 | 12.163 | |
| C | PVSP | UL4 | AX | 3 | W Mean | 4.963 | 0.195 | 0.113 | 4.758 | 5.147 | 0.554 |
| C | PVSP | UL4 | AX | 3 | P Mean | 4.952 | 0.181 | 0.105 | 4.774 | 5.136 | |
| C | PVSP | UL4 | AY | 3 | W Mean | 13.182 | 0.131 | 0.076 | 13.081 | 13.330 | 0.6762 |
| C | PVSP | UL4 | AY | 3 | P Mean | 13.155 | 0.170 | 0.098 | 12.964 | 13.288 | |
| C | PVSP | UL4 | BX | 3 | W Mean | 6.224 | 0.206 | 0.119 | 5.995 | 6.393 | 0.312 |
| C | PVSP | UL4 | BX | 3 | P Mean | 6.197 | 0.174 | 0.100 | 6.008 | 6.350 | |
| C | PVSP | UL4 | BY | 3 | W Mean | 13.106 | 0.123 | 0.071 | 13.004 | 13.243 | 0.4004 |
| C | PVSP | UL4 | BY | 3 | P Mean | 13.050 | 0.087 | 0.050 | 12.961 | 13.135 | |
| C | PVSP | UL4 | C | 3 | W Mean | 10.758 | 0.012 | 0.007 | 10.747 | 10.770 | 0.305 |

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| C | PVSP | UL4 | C | 3 | P Mean | 10.710 | 0.064 | 0.037 | 10.650 | 10.777 | |
| C | PVSP | UL4 | D | 3 | W Mean | 10.495 | 0.042 | 0.024 | 10.447 | 10.527 | 0.29 |
| C | PVSP | UL4 | D | 3 | P Mean | 10.437 | 0.101 | 0.058 | 10.330 | 10.530 | |
| C | PVSP | UL5 | AX | 3 | W Mean | 5.712 | 0.212 | 0.122 | 5.558 | 5.953 | 0.519 |
| C | PVSP | UL5 | AX | 3 | P Mean | 5.668 | 0.157 | 0.091 | 5.536 | 5.842 | |
| C | PVSP | UL5 | AY | 3 | W Mean | 13.636 | 0.106 | 0.061 | 13.562 | 13.757 | 0.6468 |
| C | PVSP | UL5 | AY | 3 | P Mean | 13.569 | 0.188 | 0.109 | 13.370 | 13.745 | |
| C | PVSP | UL5 | BX | 3 | W Mean | 7.024 | 0.228 | 0.132 | 6.840 | 7.279 | 0.192 |
| C | PVSP | UL5 | BX | 3 | P Mean | 6.927 | 0.195 | 0.112 | 6.790 | 7.150 | |
| C | PVSP | UL5 | BY | 3 | W Mean | 13.676 | 0.185 | 0.107 | 13.544 | 13.888 | 0.7112 |
| C | PVSP | UL5 | BY | 3 | P Mean | 13.621 | 0.204 | 0.118 | 13.386 | 13.745 | |
| C | PVSP | UL5 | C | 3 | W Mean | 9.611 | 0.017 | 0.010 | 9.600 | 9.630 | 0.371 |
| C | PVSP | UL5 | C | 3 | P Mean | 9.562 | 0.088 | 0.051 | 9.483 | 9.657 | |
| C | PVSP | UL5 | D | 3 | W Mean | 9.507 | 0.009 | 0.005 | 9.500 | 9.517 | 0.3399 |
| C | PVSP | UL5 | D | 3 | P Mean | 9.460 | 0.070 | 0.040 | 9.380 | 9.507 | |
| C | PVSP | UL6 | AX | 3 | W Mean | 5.834 | 0.134 | 0.077 | 5.680 | 5.924 | 0.972 |
| C | PVSP | UL6 | AX | 3 | P Mean | 5.832 | 0.177 | 0.102 | 5.642 | 5.991 | |
| C | PVSP | UL6 | AY | 3 | W Mean | 11.729 | 0.156 | 0.090 | 11.625 | 11.908 | 0.1371 |
| C | PVSP | UL6 | AY | 3 | P Mean | 11.573 | 0.145 | 0.084 | 11.418 | 11.705 | |
| C | PVSP | UL6 | BX | 3 | W Mean | 7.917 | 0.149 | 0.086 | 7.747 | 8.026 | 0.957 |
| C | PVSP | UL6 | BX | 3 | P Mean | 7.920 | 0.201 | 0.116 | 7.723 | 8.124 | |
| C | PVSP | UL6 | BY | 3 | W Mean | 11.895 | 0.114 | 0.066 | 11.769 | 11.992 | 0.4219 |
| C | PVSP | UL6 | BY | 3 | P Mean | 11.794 | 0.065 | 0.037 | 11.746 | 11.868 | |
| C | PVSP | UL6 | C | 3 | W Mean | 7.963 | 0.060 | 0.03 | 7.900 | 8.020 | 0.061 |

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| C | PVSP | UL6 | C | 3 | P Mean | 7.843 | 0.107 | 0.062 | 7.720 | 7.917 | |
| C | PVSP | UL6 | D | 3 | W Mean | 8.040 | 0.010 | 0.006 | 8.030 | 8.050 | 0.2076 |
| C | PVSP | UL6 | D | 3 | P Mean | 7.960 | 0.067 | 0.039 | 7.913 | 8.037 | |
| C | PVSP | UR1 | AX | 3 | W Mean | 5.370 | 0.165 | 0.095 | 5.180 | 5.475 | 0.078 |
| C | PVSP | UR1 | AX | 3 | P Mean | 5.416 | 0.147 | 0.085 | 5.248 | 5.524 | |
| C | PVSP | UR1 | AY | 3 | W Mean | 13.016 | 0.180 | 0.104 | 12.872 | 13.218 | 0.4402 |
| C | PVSP | UR1 | AY | 3 | P Mean | 13.200 | 0.306 | 0.176 | 12.914 | 13.522 | |
| C | PVSP | UR1 | BX | 3 | W Mean | 6.978 | 0.164 | 0.095 | 6.789 | 7.074 | 0.798 |
| C | PVSP | UR1 | BX | 3 | P Mean | 6.971 | 0.122 | 0.071 | 6.830 | 7.042 | |
| C | PVSP | UR1 | BY | 3 | W Mean | 13.012 | 0.210 | 0.121 | 12.824 | 13.238 | 0.4522 |
| C | PVSP | UR1 | BY | 3 | P Mean | 13.191 | 0.344 | 0.199 | 12.850 | 13.538 | |
| C | PVSP | UR1 | C | 3 | W Mean | 13.767 | 0.014 | 0.008 | 13.757 | 13.783 | 0.175 |
| C | PVSP | UR1 | C | 3 | P Mean | 13.691 | 0.057 | 0.033 | 13.653 | 13.757 | |
| C | PVSP | UR1 | D | 3 | W Mean | 13.736 | 0.039 | 0.022 | 13.700 | 13.777 | 0.0746 |
| C | PVSP | UR1 | D | 3 | P Mean | 13.690 | 0.020 | 0.012 | 13.677 | 13.713 | |
| C | PVSP | UR2 | AX | 3 | W Mean | 2.995 | 0.093 | 0.054 | 2.917 | 3.098 | 0.184 |
| C | PVSP | UR2 | AX | 3 | P Mean | 2.962 | 0.121 | 0.070 | 2.867 | 3.098 | |
| C | PVSP | UR2 | AY | 3 | W Mean | 13.179 | 0.227 | 0.131 | 12.999 | 13.434 | 0.1799 |
| C | PVSP | UR2 | AY | 3 | P Mean | 13.359 | 0.125 | 0.072 | 13.238 | 13.488 | |
| C | PVSP | UR2 | BX | 3 | W Mean | 4.011 | 0.122 | 0.071 | 3.926 | 4.151 | 0.061 |
| C | PVSP | UR2 | BX | 3 | P Mean | 3.958 | 0.125 | 0.072 | 3.851 | 4.096 | |
| C | PVSP | UR2 | BY | 3 | W Mean | 13.194 | 0.220 | 0.127 | 12.986 | 13.425 | 0.1685 |
| C | PVSP | UR2 | BY | 3 | P Mean | 13.377 | 0.082 | 0.048 | 13.329 | 13.472 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| C | PVSP | UR2 | C | 3 | W Mean | 13.649 | 0.117 | 0.067 | 13.520 | 13.747 | 0.431 |
| C | PVSP | UR2 | C | 3 | P Mean | 13.613 | 0.135 | 0.078 | 13.503 | 13.763 | |
| C | PVSP | UR2 | D | 3 | W Mean | 13.581 | 0.072 | 0.042 | 13.527 | 13.663 | 0.0775 |
| C | PVSP | UR2 | D | 3 | P Mean | 13.543 | 0.090 | 0.052 | 13.483 | 13.647 | |
| C | PVSP | UR3 | AX | 3 | W Mean | 5.723 | 0.230 | 0.133 | 5.500 | 5.959 | 0.800 |
| C | PVSP | UR3 | AX | 3 | P Mean | 5.712 | 0.290 | 0.168 | 5.440 | 6.018 | |
| C | PVSP | UR3 | AY | 3 | W Mean | 13.067 | 0.069 | 0.040 | 13.017 | 13.146 | 0.3967 |
| C | PVSP | UR3 | AY | 3 | P Mean | 13.165 | 0.223 | 0.128 | 12.944 | 13.389 | |
| C | PVSP | UR3 | BX | 3 | W Mean | 7.054 | 0.194 | 0.112 | 6.858 | 7.245 | 0.958 |
| C | PVSP | UR3 | BX | 3 | P Mean | 7.052 | 0.269 | 0.155 | 6.769 | 7.304 | |
| C | PVSP | UR3 | BY | 3 | W Mean | 12.961 | 0.118 | 0.068 | 12.827 | 13.049 | 0.3798 |
| C | PVSP | UR3 | BY | 3 | P Mean | 13.050 | 0.255 | 0.147 | 12.767 | 13.261 | |
| C | PVSP | UR3 | C | 3 | W Mean | 11.886 | 0.041 | 0.024 | 11.840 | 11.920 | 0.078 |
| C | PVSP | UR3 | C | 3 | P Mean | 11.829 | 0.065 | 0.038 | 11.767 | 11.897 | |
| C | PVSP | UR3 | D | 3 | W Mean | 12.173 | 0.026 | 0.015 | 12.153 | 12.203 | 0.158 |
| C | PVSP | UR3 | D | 3 | P Mean | 12.109 | 0.039 | 0.022 | 12.070 | 12.147 | |
| C | PVSP | UR4 | AX | 3 | W Mean | 8.894 | 0.344 | 0.199 | 8.541 | 9.228 | 0.151 |
| C | PVSP | UR4 | AX | 3 | P Mean | 9.012 | 0.254 | 0.147 | 8.756 | 9.264 | |
| C | PVSP | UR4 | AY | 3 | W Mean | 10.800 | 0.251 | 0.145 | 10.602 | 11.082 | 0.4205 |
| C | PVSP | UR4 | AY | 3 | P Mean | 10.884 | 0.138 | 0.080 | 10.770 | 11.038 | |
| C | PVSP | UR4 | BX | 3 | W Mean | 10.124 | 0.256 | 0.148 | 9.873 | 10.385 | 0.145 |
| C | PVSP | UR4 | BX | 3 | P Mean | 10.187 | 0.217 | 0.125 | 9.962 | 10.394 | |
| C | PVSP | UR4 | BY | 3 | W Mean | 10.701 | 0.195 | 0.112 | 10.571 | 10.925 | 0.4459 |
| C | PVSP | UR4 | BY | 3 | P Mean | 10.78 | 0.107 | 0.06 | 10.66 | 10.86 | |

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| | | | | | | 9 | | 2 | 7 | 7 | |
| C | PVSP | UR4 | C | 3 | W Mean | 8.939 | 0.044 | 0.026 | 8.910 | 8.990 | 0.992 |
| C | PVSP | UR4 | C | 3 | P Mean | 8.940 | 0.108 | 0.063 | 8.823 | 9.037 | |
| C | PVSP | UR4 | D | 3 | W Mean | 8.952 | 0.022 | 0.012 | 8.937 | 8.977 | 0.2634 |
| C | PVSP | UR4 | D | 3 | P Mean | 9.031 | 0.091 | 0.053 | 8.927 | 9.097 | |
| C | PVSP | UR5 | AX | 3 | W Mean | 5.924 | 0.201 | 0.116 | 5.732 | 6.133 | 0.449 |
| C | PVSP | UR5 | AX | 3 | P Mean | 5.972 | 0.245 | 0.141 | 5.808 | 6.254 | |
| C | PVSP | UR5 | AY | 3 | W Mean | 12.603 | 0.272 | 0.157 | 12.300 | 12.825 | 0.4347 |
| C | PVSP | UR5 | AY | 3 | P Mean | 12.551 | 0.257 | 0.148 | 12.308 | 12.820 | |
| C | PVSP | UR5 | BX | 3 | W Mean | 7.141 | 0.156 | 0.090 | 6.993 | 7.304 | 0.490 |
| C | PVSP | UR5 | BX | 3 | P Mean | 7.183 | 0.198 | 0.115 | 7.068 | 7.412 | |
| C | PVSP | UR5 | BY | 3 | W Mean | 12.592 | 0.285 | 0.164 | 12.273 | 12.819 | 0.5373 |
| C | PVSP | UR5 | BY | 3 | P Mean | 12.552 | 0.283 | 0.164 | 12.277 | 12.843 | |
| C | PVSP | UR5 | C | 3 | W Mean | 9.905 | 0.141 | 0.082 | 9.750 | 10.027 | 0.130 |
| C | PVSP | UR5 | C | 3 | P Mean | 9.681 | 0.016 | 0.009 | 9.663 | 9.693 | |
| C | PVSP | UR5 | D | 3 | W Mean | 9.945 | 0.099 | 0.057 | 9.830 | 10.007 | 0.128 |
| C | PVSP | UR5 | D | 3 | P Mean | 9.692 | 0.097 | 0.056 | 9.580 | 9.750 | |
| C | PVSP | UR6 | AX | 3 | W Mean | 5.978 | 0.094 | 0.054 | 5.879 | 6.066 | 0.760 |
| C | PVSP | UR6 | AX | 3 | P Mean | 5.962 | 0.119 | 0.069 | 5.885 | 6.099 | |
| C | PVSP | UR6 | AY | 3 | W Mean | 9.026 | 0.348 | 0.201 | 8.629 | 9.275 | 0.749 |
| C | PVSP | UR6 | AY | 3 | P Mean | 8.964 | 0.063 | 0.036 | 8.895 | 9.019 | |
| C | PVSP | UR6 | BX | 3 | W Mean | 8.062 | 0.093 | 0.054 | 7.958 | 8.138 | 0.514 |
| C | PVSP | UR6 | BX | 3 | P Mean | 8.092 | 0.085 | 0.049 | 8.043 | 8.190 | |
| C | PVSP | UR6 | BY | 3 | W Mean | 9.092 | 0.465 | 0.269 | 8.559 | 9.414 | 0.5745 |

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| C | PVSP | UR6 | BY | 3 | P Mean | 8.975 | 0.194 | 0.112 | 8.789 | 9.177 | |
| C | PVSP | UR6 | C | 3 | W Mean | 7.607 | 0.069 | 0.040 | 7.530 | 7.663 | 0.248 |
| C | PVSP | UR6 | C | 3 | P Mean | 7.535 | 0.122 | 0.070 | 7.403 | 7.643 | |
| C | PVSP | UR6 | D | 3 | W Mean | 8.192 | 0.033 | 0.019 | 8.170 | 8.230 | 0.3283 |
| C | PVSP | UR6 | D | 3 | P Mean | 8.143 | 0.057 | 0.033 | 8.083 | 8.197 | |
| D | DPVS | UL1 | AX | 3 | W Mean | 2.692 | 0.249 | 0.144 | 2.470 | 2.961 | 0.268 |
| D | DPVS | UL1 | AX | 3 | P Mean | 2.750 | 0.315 | 0.182 | 2.472 | 3.092 | |
| D | DPVS | UL1 | AY | 3 | W Mean | 12.945 | 0.530 | 0.306 | 12.334 | 13.288 | 0.3853 |
| D | DPVS | UL1 | AY | 3 | P Mean | 12.592 | 0.415 | 0.240 | 12.307 | 13.069 | |
| D | DPVS | UL1 | BX | 3 | W Mean | 4.274 | 0.275 | 0.159 | 4.034 | 4.574 | 0.0184* |
| D | DPVS | UL1 | BX | 3 | P Mean | 4.381 | 0.297 | 0.172 | 4.131 | 4.710 | |
| D | DPVS | UL1 | BY | 3 | W Mean | 12.960 | 0.549 | 0.317 | 12.334 | 13.361 | 0.3898 |
| D | DPVS | UL1 | BY | 3 | P Mean | 12.613 | 0.392 | 0.226 | 12.385 | 13.066 | |
| D | DPVS | UL1 | C | 3 | W Mean | 12.985 | 0.094 | 0.054 | 12.923 | 13.093 | 0.026* |
| D | DPVS | UL1 | C | 3 | P Mean | 12.909 | 0.079 | 0.046 | 12.843 | 12.997 | |
| D | DPVS | UL1 | D | 3 | W Mean | 13.073 | 0.045 | 0.026 | 13.030 | 13.120 | 0.1601 |
| D | DPVS | UL1 | D | 3 | P Mean | 12.993 | 0.106 | 0.061 | 12.910 | 13.113 | |
| D | DPVS | UL2 | AX | 3 | W Mean | 0.470 | 0.297 | 0.172 | 0.151 | 0.740 | 0.494 |
| D | DPVS | UL2 | AX | 3 | P Mean | 0.427 | 0.215 | 0.124 | 0.186 | 0.600 | |
| D | DPVS | UL2 | AY | 3 | W Mean | 10.293 | 0.512 | 0.296 | 9.944 | 10.881 | 0.1816 |
| D | DPVS | UL2 | AY | 3 | P Mean | 10.058 | 0.499 | 0.288 | 9.638 | 10.610 | |
| D | DPVS | UL2 | BX | 3 | W Mean | 1.432 | 0.256 | 0.148 | 1.150 | 1.649 | 0.597 |
| D | DPVS | UL2 | BX | 3 | P Mean | 1.402 | 0.186 | 0.107 | 1.188 | 1.523 | |
| D | DPVS | UL2 | BY | 3 | W Mean | 10.28 | 0.508 | 0.29 | 9.962 | 10.87 | 0.1594 |

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| | | | | | | 8 | | 3 | | 3 | |
| D | DPVS | UL2 | BY | 3 | P Mean | 10.043 | 0.477 | 0.276 | 9.630 | 10.566 | |
| D | DPVS | UL2 | C | 3 | W Mean | 13.726 | 0.067 | 0.038 | 13.653 | 13.783 | 0.279 |
| D | DPVS | UL2 | C | 3 | P Mean | 13.625 | 0.186 | 0.108 | 13.417 | 13.777 | |
| D | DPVS | UL2 | D | 3 | W Mean | 13.467 | 0.104 | 0.060 | 13.397 | 13.587 | 0.587 |
| D | DPVS | UL2 | D | 3 | P Mean | 13.395 | 0.295 | 0.170 | 13.150 | 13.723 | |
| D | DPVS | UL3 | AX | 3 | W Mean | 0.395 | 0.264 | 0.152 | 0.093 | 0.580 | 0.105 |
| D | DPVS | UL3 | AX | 3 | P Mean | 0.284 | 0.330 | 0.191 | -0.096 | 0.503 | |
| D | DPVS | UL3 | AY | 3 | W Mean | 11.404 | 0.357 | 0.206 | 11.113 | 11.803 | 0.5317 |
| D | DPVS | UL3 | AY | 3 | P Mean | 11.314 | 0.291 | 0.168 | 11.054 | 11.628 | |
| D | DPVS | UL3 | BX | 3 | W Mean | 1.678 | 0.242 | 0.140 | 1.399 | 1.832 | 0.053 |
| D | DPVS | UL3 | BX | 3 | P Mean | 1.590 | 0.279 | 0.161 | 1.268 | 1.760 | |
| D | DPVS | UL3 | BY | 3 | W Mean | 11.333 | 0.341 | 0.197 | 11.024 | 11.699 | 0.5647 |
| D | DPVS | UL3 | BY | 3 | P Mean | 11.242 | 0.271 | 0.157 | 11.001 | 11.536 | |
| D | DPVS | UL3 | C | 3 | W Mean | 11.938 | 0.179 | 0.104 | 11.780 | 12.133 | 0.241 |
| D | DPVS | UL3 | C | 3 | P Mean | 11.838 | 0.095 | 0.055 | 11.770 | 11.947 | |
| D | DPVS | UL3 | D | 3 | W Mean | 12.186 | 0.146 | 0.084 | 12.063 | 12.347 | 0.3575 |
| D | DPVS | UL3 | D | 3 | P Mean | 12.084 | 0.116 | 0.067 | 11.963 | 12.193 | |
| D | DPVS | UL4 | AX | 3 | W Mean | -0.810 | 0.117 | 0.068 | -0.937 | -0.707 | 0.515 |
| D | DPVS | UL4 | AX | 3 | P Mean | -0.862 | 0.230 | 0.133 | -1.124 | -0.692 | |
| D | DPVS | UL4 | AY | 3 | W Mean | 10.891 | 0.287 | 0.166 | 10.583 | 11.151 | 0.2291 |
| D | DPVS | UL4 | AY | 3 | P Mean | 10.843 | 0.248 | 0.143 | 10.590 | 11.085 | |
| D | DPVS | UL4 | BX | 3 | W Mean | 0.408 | 0.155 | 0.089 | 0.231 | 0.518 | 0.759 |
| D | DPVS | UL4 | BX | 3 | P Mean | 0.400 | 0.186 | 0.107 | 0.194 | 0.555 | |

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| D | DPVS | UL4 | BY | 3 | W Mean | 10.816 | 0.305 | 0.176 | 10.496 | 11.103 | 0.142 |
| D | DPVS | UL4 | BY | 3 | P Mean | 10.776 | 0.317 | 0.183 | 10.458 | 11.091 | |
| D | DPVS | UL4 | C | 3 | W Mean | 10.083 | 0.075 | 0.043 | 10.023 | 10.167 | 0.053 |
| D | DPVS | UL4 | C | 3 | P Mean | 9.924 | 0.037 | 0.021 | 9.883 | 9.953 | |
| D | DPVS | UL4 | D | 3 | W Mean | 10.063 | 0.085 | 0.049 | 9.973 | 10.143 | 0.051 |
| D | DPVS | UL4 | D | 3 | P Mean | 9.931 | 0.105 | 0.061 | 9.810 | 10.003 | |
| D | DPVS | UL5 | AX | 3 | W Mean | -3.302 | 0.044 | 0.026 | -3.349 | -3.261 | 0.099 |
| D | DPVS | UL5 | AX | 3 | P Mean | -3.428 | 0.030 | 0.017 | -3.454 | -3.395 | |
| D | DPVS | UL5 | AY | 3 | W Mean | 10.690 | 0.339 | 0.196 | 10.434 | 11.075 | 0.3826 |
| D | DPVS | UL5 | AY | 3 | P Mean | 10.598 | 0.253 | 0.146 | 10.337 | 10.842 | |
| D | DPVS | UL5 | BX | 3 | W Mean | -2.009 | 0.082 | 0.048 | -2.104 | -1.958 | 0.280 |
| D | DPVS | UL5 | BX | 3 | P Mean | -2.095 | 0.033 | 0.019 | -2.133 | -2.074 | |
| D | DPVS | UL5 | BY | 3 | W Mean | 10.647 | 0.281 | 0.162 | 10.429 | 10.964 | 0.3931 |
| D | DPVS | UL5 | BY | 3 | P Mean | 10.566 | 0.214 | 0.123 | 10.337 | 10.760 | |
| D | DPVS | UL5 | C | 3 | W Mean | 9.949 | 0.102 | 0.059 | 9.890 | 10.067 | 0.224 |
| D | DPVS | UL5 | C | 3 | P Mean | 9.877 | 0.054 | 0.031 | 9.817 | 9.923 | |
| D | DPVS | UL5 | D | 3 | W Mean | 9.788 | 0.146 | 0.084 | 9.677 | 9.953 | 0.5741 |
| D | DPVS | UL5 | D | 3 | P Mean | 9.746 | 0.109 | 0.063 | 9.620 | 9.810 | |
| D | DPVS | UL6 | AX | 3 | W Mean | -1.174 | 0.206 | 0.119 | -1.386 | -0.974 | 0.247 |
| D | DPVS | UL6 | AX | 3 | P Mean | -1.226 | 0.248 | 0.143 | -1.499 | -1.013 | |
| D | DPVS | UL6 | AY | 3 | W Mean | 8.814 | 0.596 | 0.344 | 8.136 | 9.255 | 0.1284 |
| D | DPVS | UL6 | AY | 3 | P Mean | 8.587 | 0.618 | 0.357 | 7.876 | 8.994 | |
| D | DPVS | UL6 | BX | 3 | W Mean | 0.806 | 0.066 | 0.038 | 0.739 | 0.870 | 0.619 |
| D | DPVS | UL6 | BX | 3 | P Mean | 0.867 | 0.219 | 0.12 | 0.628 | 1.057 | |

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| D | DPVS | UL6 | BY | 3 | W Mean | 9.050 | 0.712 | 0.411 | 8.232 | 9.526 | 0.2064 |
| D | DPVS | UL6 | BY | 3 | P Mean | 8.860 | 0.805 | 0.465 | 7.936 | 9.408 | |
| D | DPVS | UL6 | C | 3 | W Mean | 7.814 | 0.088 | 0.051 | 7.713 | 7.867 | 0.744 |
| D | DPVS | UL6 | C | 3 | P Mean | 7.779 | 0.137 | 0.079 | 7.643 | 7.917 | |
| D | DPVS | UL6 | D | 3 | W Mean | 7.891 | 0.156 | 0.090 | 7.767 | 8.067 | 0.8757 |
| D | DPVS | UL6 | D | 3 | P Mean | 7.876 | 0.062 | 0.036 | 7.813 | 7.937 | |
| D | DPVS | UR1 | AX | 3 | W Mean | 3.951 | 0.159 | 0.092 | 3.831 | 4.131 | 0.076 |
| D | DPVS | UR1 | AX | 3 | P Mean | 3.867 | 0.160 | 0.092 | 3.714 | 4.033 | |
| D | DPVS | UR1 | AY | 3 | W Mean | 10.849 | 0.282 | 0.163 | 10.562 | 11.126 | 0.0007 * |
| D | DPVS | UR1 | AY | 3 | P Mean | 10.732 | 0.285 | 0.164 | 10.445 | 11.014 | |
| D | DPVS | UR1 | BX | 3 | W Mean | 5.494 | 0.180 | 0.104 | 5.317 | 5.676 | 0.623 |
| D | DPVS | UR1 | BX | 3 | P Mean | 5.477 | 0.154 | 0.089 | 5.355 | 5.650 | |
| D | DPVS | UR1 | BY | 3 | W Mean | 10.858 | 0.269 | 0.155 | 10.602 | 11.138 | 0.0027 * |
| D | DPVS | UR1 | BY | 3 | P Mean | 10.729 | 0.280 | 0.162 | 10.462 | 11.021 | |
| D | DPVS | UR1 | C | 3 | W Mean | 13.203 | 0.209 | 0.121 | 12.963 | 13.343 | 0.379 |
| D | DPVS | UR1 | C | 3 | P Mean | 13.125 | 0.115 | 0.066 | 13.003 | 13.230 | |
| D | DPVS | UR1 | D | 3 | W Mean | 13.272 | 0.065 | 0.038 | 13.203 | 13.333 | 0.1977 |
| D | DPVS | UR1 | D | 3 | P Mean | 13.227 | 0.072 | 0.042 | 13.183 | 13.310 | |
| D | DPVS | UR2 | AX | 3 | W Mean | 7.335 | 0.181 | 0.104 | 7.143 | 7.502 | 0.260 |
| D | DPVS | UR2 | AX | 3 | P Mean | 7.300 | 0.220 | 0.127 | 7.066 | 7.502 | |
| D | DPVS | UR2 | AY | 3 | W Mean | 12.122 | 0.225 | 0.130 | 11.868 | 12.295 | 0.6158 |
| D | DPVS | UR2 | AY | 3 | P Mean | 11.983 | 0.459 | 0.265 | 11.611 | 12.496 | |
| D | DPVS | UR2 | BX | 3 | W Mean | 8.371 | 0.196 | 0.113 | 8.152 | 8.531 | 0.776 |

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| D | DPVS | UR2 | BX | 3 | P Mean | 8.383 | 0.248 | 0.143 | 8.119 | 8.611 | |
| D | DPVS | UR2 | BY | 3 | W Mean | 12.102 | 0.277 | 0.160 | 11.785 | 12.302 | 0.5762 |
| D | DPVS | UR2 | BY | 3 | P Mean | 11.944 | 0.468 | 0.270 | 11.600 | 12.477 | |
| D | DPVS | UR2 | C | 3 | W Mean | 13.708 | 0.112 | 0.065 | 13.640 | 13.837 | 0.255 |
| D | DPVS | UR2 | C | 3 | P Mean | 13.658 | 0.057 | 0.033 | 13.623 | 13.723 | |
| D | DPVS | UR2 | D | 3 | W Mean | 13.650 | 0.040 | 0.023 | 13.613 | 13.693 | 0.5895 |
| D | DPVS | UR2 | D | 3 | P Mean | 13.669 | 0.087 | 0.051 | 13.617 | 13.770 | |
| D | DPVS | UR3 | AX | 3 | W Mean | 9.430 | 0.079 | 0.046 | 9.350 | 9.508 | 0.838 |
| D | DPVS | UR3 | AX | 3 | P Mean | 9.455 | 0.257 | 0.148 | 9.243 | 9.740 | |
| D | DPVS | UR3 | AY | 3 | W Mean | 11.123 | 0.286 | 0.165 | 10.844 | 11.416 | 0.2929 |
| D | DPVS | UR3 | AY | 3 | P Mean | 10.907 | 0.444 | 0.256 | 10.394 | 11.179 | |
| D | DPVS | UR3 | BX | 3 | W Mean | 10.736 | 0.034 | 0.020 | 10.716 | 10.775 | 0.809 |
| D | DPVS | UR3 | BX | 3 | P Mean | 10.760 | 0.187 | 0.108 | 10.641 | 10.976 | |
| D | DPVS | UR3 | BY | 3 | W Mean | 11.122 | 0.261 | 0.151 | 10.853 | 11.374 | 0.2187 |
| D | DPVS | UR3 | BY | 3 | P Mean | 10.862 | 0.436 | 0.251 | 10.361 | 11.151 | |
| D | DPVS | UR3 | C | 3 | W Mean | 11.803 | 0.105 | 0.060 | 11.730 | 11.923 | 0.477 |
| D | DPVS | UR3 | C | 3 | P Mean | 11.767 | 0.042 | 0.024 | 11.727 | 11.810 | |
| D | DPVS | UR3 | D | 3 | W Mean | 12.044 | 0.051 | 0.030 | 12.007 | 12.103 | 0.1555 |
| D | DPVS | UR3 | D | 3 | P Mean | 12.022 | 0.058 | 0.034 | 11.967 | 12.083 | |
| D | DPVS | UR4 | AX | 3 | W Mean | 8.486 | 0.063 | 0.036 | 8.444 | 8.559 | 0.832 |
| D | DPVS | UR4 | AX | 3 | P Mean | 8.471 | 0.088 | 0.051 | 8.382 | 8.558 | |
| D | DPVS | UR4 | AY | 3 | W Mean | 11.819 | 0.288 | 0.166 | 11.501 | 12.063 | 0.8725 |
| D | DPVS | UR4 | AY | 3 | P Mean | 11.846 | 0.542 | 0.313 | 11.242 | 12.290 | |
| D | DPVS | UR4 | BX | 3 | W Mean | 9.674 | 0.062 | 0.03 | 9.630 | 9.745 | 0.730 |

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| D | DPVS | UR4 | BX | 3 | P Mean | 9.649 | 0.091 | 0.053 | 9.562 | 9.744 | |
| D | DPVS | UR4 | BY | 3 | W Mean | 11.874 | 0.318 | 0.184 | 11.517 | 12.129 | 0.9251 |
| D | DPVS | UR4 | BY | 3 | P Mean | 11.890 | 0.585 | 0.337 | 11.231 | 12.346 | |
| D | DPVS | UR4 | C | 3 | W Mean | 9.823 | 0.048 | 0.028 | 9.777 | 9.873 | 0.131 |
| D | DPVS | UR4 | C | 3 | P Mean | 9.747 | 0.101 | 0.058 | 9.660 | 9.857 | |
| D | DPVS | UR4 | D | 3 | W Mean | 9.481 | 0.114 | 0.066 | 9.353 | 9.570 | 0.8443 |
| D | DPVS | UR4 | D | 3 | P Mean | 9.498 | 0.212 | 0.122 | 9.323 | 9.733 | |
| D | DPVS | UR5 | AX | 3 | W Mean | 6.421 | 0.147 | 0.085 | 6.322 | 6.590 | 0.780 |
| D | DPVS | UR5 | AX | 3 | P Mean | 6.440 | 0.252 | 0.145 | 6.289 | 6.731 | |
| D | DPVS | UR5 | AY | 3 | W Mean | 9.587 | 0.566 | 0.327 | 8.969 | 10.080 | 0.9835 |
| D | DPVS | UR5 | AY | 3 | P Mean | 9.591 | 0.566 | 0.327 | 8.950 | 10.022 | |
| D | DPVS | UR5 | BX | 3 | W Mean | 7.669 | 0.148 | 0.086 | 7.538 | 7.830 | 0.575 |
| D | DPVS | UR5 | BX | 3 | P Mean | 7.705 | 0.237 | 0.137 | 7.529 | 7.974 | |
| D | DPVS | UR5 | BY | 3 | W Mean | 9.522 | 0.477 | 0.276 | 9.006 | 9.948 | 0.9902 |
| D | DPVS | UR5 | BY | 3 | P Mean | 9.519 | 0.500 | 0.289 | 8.959 | 9.921 | |
| D | DPVS | UR5 | C | 3 | W Mean | 9.577 | 0.012 | 0.007 | 9.567 | 9.590 | 0.0099 * |
| D | DPVS | UR5 | C | 3 | P Mean | 9.464 | 0.027 | 0.016 | 9.433 | 9.483 | |
| D | DPVS | UR5 | D | 3 | W Mean | 9.622 | 0.079 | 0.046 | 9.570 | 9.713 | 0.1132 |
| D | DPVS | UR5 | D | 3 | P Mean | 9.559 | 0.051 | 0.029 | 9.513 | 9.613 | |
| D | DPVS | UR6 | AX | 3 | W Mean | 8.869 | 0.243 | 0.140 | 8.659 | 9.135 | 0.0144 * |
| D | DPVS | UR6 | AX | 3 | P Mean | 8.841 | 0.238 | 0.138 | 8.631 | 9.100 | |
| D | DPVS | UR6 | AY | 3 | W Mean | 8.089 | 0.406 | 0.235 | 7.620 | 8.335 | 0.6931 |
| D | DPVS | UR6 | AY | 3 | P Mean | 8.058 | 0.500 | 0.289 | 7.485 | 8.407 | |

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| D | DPVS | UR6 | BX | 3 | W Mean | 10.945 | 0.262 | 0.152 | 10.692 | 11.216 | 0.796 |
| D | DPVS | UR6 | BX | 3 | P Mean | 10.939 | 0.246 | 0.142 | 10.723 | 11.206 | |
| D | DPVS | UR6 | BY | 3 | W Mean | 8.095 | 0.416 | 0.240 | 7.620 | 8.398 | 0.7574 |
| D | DPVS | UR6 | BY | 3 | P Mean | 8.069 | 0.499 | 0.288 | 7.493 | 8.381 | |
| D | DPVS | UR6 | C | 3 | W Mean | 7.377 | 0.105 | 0.061 | 7.283 | 7.490 | 0.194 |
| D | DPVS | UR6 | C | 3 | P Mean | 7.274 | 0.195 | 0.113 | 7.083 | 7.473 | |
| D | DPVS | UR6 | D | 3 | W Mean | 7.868 | 0.005 | 0.003 | 7.863 | 7.873 | 0.1095 |
| D | DPVS | UR6 | D | 3 | P Mean | 7.777 | 0.058 | 0.033 | 7.727 | 7.840 | |
| D | DVF | UL1 | AX | 3 | W Mean | 2.665 | 0.424 | 0.245 | 2.239 | 3.087 | 0.180 |
| D | DVF | UL1 | AX | 3 | P Mean | 2.872 | 0.349 | 0.201 | 2.471 | 3.106 | |
| D | DVF | UL1 | AY | 3 | W Mean | 12.636 | 0.322 | 0.186 | 12.264 | 12.823 | 0.1231 |
| D | DVF | UL1 | AY | 3 | P Mean | 13.000 | 0.392 | 0.226 | 12.645 | 13.420 | |
| D | DVF | UL1 | BX | 3 | W Mean | 4.249 | 0.453 | 0.262 | 3.802 | 4.708 | 0.188 |
| D | DVF | UL1 | BX | 3 | P Mean | 4.496 | 0.328 | 0.189 | 4.118 | 4.711 | |
| D | DVF | UL1 | BY | 3 | W Mean | 12.651 | 0.386 | 0.223 | 12.208 | 12.911 | 0.1076 |
| D | DVF | UL1 | BY | 3 | P Mean | 13.013 | 0.414 | 0.239 | 12.586 | 13.412 | |
| D | DVF | UL1 | C | 3 | W Mean | 13.188 | 0.128 | 0.074 | 13.040 | 13.270 | 0.323 |
| D | DVF | UL1 | C | 3 | P Mean | 13.065 | 0.059 | 0.034 | 12.997 | 13.100 | |
| D | DVF | UL1 | D | 3 | W Mean | 13.168 | 0.104 | 0.060 | 13.057 | 13.263 | 0.2044 |
| D | DVF | UL1 | D | 3 | P Mean | 13.031 | 0.084 | 0.048 | 12.937 | 13.097 | |
| D | DVF | UL2 | AX | 3 | W Mean | 0.282 | 0.189 | 0.109 | 0.119 | 0.489 | 0.897 |
| D | DVF | UL2 | AX | 3 | P Mean | 0.291 | 0.144 | 0.083 | 0.173 | 0.451 | |
| D | DVF | UL2 | AY | 3 | W Mean | 9.953 | 0.417 | 0.241 | 9.480 | 10.267 | 0.9774 |
| D | DVF | UL2 | AY | 3 | P Mean | 9.947 | 0.184 | 0.10 | 9.766 | 10.13 | |

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| D | DVF | UL2 | BX | 3 | W Mean | 1.275 | 0.171 | 0.099 | 1.111 | 1.453 | 0.850 |
| D | DVF | UL2 | BX | 3 | P Mean | 1.291 | 0.118 | 0.068 | 1.184 | 1.417 | |
| D | DVF | UL2 | BY | 3 | W Mean | 9.962 | 0.430 | 0.248 | 9.480 | 10.305 | 0.9829 |
| D | DVF | UL2 | BY | 3 | P Mean | 9.957 | 0.183 | 0.105 | 9.767 | 10.131 | |
| D | DVF | UL2 | C | 3 | W Mean | 13.808 | 0.094 | 0.054 | 13.720 | 13.907 | 0.308 |
| D | DVF | UL2 | C | 3 | P Mean | 13.655 | 0.101 | 0.059 | 13.543 | 13.740 | |
| D | DVF | UL2 | D | 3 | W Mean | 13.458 | 0.138 | 0.080 | 13.307 | 13.577 | 0.1688 |
| D | DVF | UL2 | D | 3 | P Mean | 13.307 | 0.084 | 0.049 | 13.237 | 13.400 | |
| D | DVF | UL3 | AX | 3 | W Mean | 0.564 | 0.207 | 0.119 | 0.326 | 0.701 | 0.541 |
| D | DVF | UL3 | AX | 3 | P Mean | 0.493 | 0.233 | 0.134 | 0.285 | 0.744 | |
| D | DVF | UL3 | AY | 3 | W Mean | 11.100 | 0.330 | 0.190 | 10.832 | 11.468 | 0.7408 |
| D | DVF | UL3 | AY | 3 | P Mean | 11.017 | 0.181 | 0.105 | 10.868 | 11.219 | |
| D | DVF | UL3 | BX | 3 | W Mean | 1.832 | 0.219 | 0.127 | 1.579 | 1.965 | 0.487 |
| D | DVF | UL3 | BX | 3 | P Mean | 1.753 | 0.224 | 0.129 | 1.559 | 1.998 | |
| D | DVF | UL3 | BY | 3 | W Mean | 10.991 | 0.316 | 0.183 | 10.713 | 11.335 | 0.6855 |
| D | DVF | UL3 | BY | 3 | P Mean | 10.892 | 0.227 | 0.131 | 10.700 | 11.143 | |
| D | DVF | UL3 | C | 3 | W Mean | 12.114 | 0.085 | 0.049 | 12.023 | 12.190 | 0.069 |
| D | DVF | UL3 | C | 3 | P Mean | 12.005 | 0.059 | 0.034 | 11.970 | 12.073 | |
| D | DVF | UL3 | D | 3 | W Mean | 12.293 | 0.034 | 0.020 | 12.263 | 12.330 | 0.008* |
| D | DVF | UL3 | D | 3 | P Mean | 12.152 | 0.056 | 0.032 | 12.103 | 12.213 | |
| D | DVF | UL4 | AX | 3 | W Mean | -0.849 | 0.256 | 0.148 | -1.066 | -0.566 | 0.376 |
| D | DVF | UL4 | AX | 3 | P Mean | -0.951 | 0.110 | 0.063 | -1.067 | -0.849 | |
| D | DVF | UL4 | AY | 3 | W Mean | 10.970 | 0.033 | 0.019 | 10.939 | 11.004 | 0.8492 |

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| D | DVF | UL4 | AY | 3 | P Mean | 11.000 | 0.271 | 0.156 | 10.826 | 11.312 | |
| D | DVF | UL4 | BX | 3 | W Mean | 0.414 | 0.209 | 0.121 | 0.239 | 0.645 | 0.119 |
| D | DVF | UL4 | BX | 3 | P Mean | 0.265 | 0.141 | 0.082 | 0.112 | 0.390 | |
| D | DVF | UL4 | BY | 3 | W Mean | 10.910 | 0.042 | 0.025 | 10.875 | 10.957 | 0.8457 |
| D | DVF | UL4 | BY | 3 | P Mean | 10.940 | 0.275 | 0.158 | 10.754 | 11.255 | |
| D | DVF | UL4 | C | 3 | W Mean | 10.031 | 0.063 | 0.036 | 9.977 | 10.100 | 0.173 |
| D | DVF | UL4 | C | 3 | P Mean | 9.948 | 0.103 | 0.059 | 9.853 | 10.057 | |
| D | DVF | UL4 | D | 3 | W Mean | 10.074 | 0.034 | 0.020 | 10.037 | 10.103 | 0.2987 |
| D | DVF | UL4 | D | 3 | P Mean | 10.003 | 0.079 | 0.046 | 9.913 | 10.060 | |
| D | DVF | UL5 | AX | 3 | W Mean | -3.382 | 0.226 | 0.130 | -3.639 | -3.216 | 0.155 |
| D | DVF | UL5 | AX | 3 | P Mean | -3.542 | 0.345 | 0.199 | -3.940 | -3.328 | |
| D | DVF | UL5 | AY | 3 | W Mean | 11.019 | 0.219 | 0.126 | 10.883 | 11.272 | 0.9622 |
| D | DVF | UL5 | AY | 3 | P Mean | 11.026 | 0.420 | 0.242 | 10.699 | 11.499 | |
| D | DVF | UL5 | BX | 3 | W Mean | -2.110 | 0.243 | 0.140 | -2.390 | -1.958 | 0.201 |
| D | DVF | UL5 | BX | 3 | P Mean | -2.263 | 0.380 | 0.220 | -2.702 | -2.023 | |
| D | DVF | UL5 | BY | 3 | W Mean | 10.875 | 0.150 | 0.086 | 10.759 | 11.044 | 0.9832 |
| D | DVF | UL5 | BY | 3 | P Mean | 10.878 | 0.367 | 0.212 | 10.582 | 11.289 | |
| D | DVF | UL5 | C | 3 | W Mean | 9.885 | 0.132 | 0.076 | 9.733 | 9.973 | 0.969 |
| D | DVF | UL5 | C | 3 | P Mean | 9.887 | 0.118 | 0.068 | 9.767 | 10.003 | |
| D | DVF | UL5 | D | 3 | W Mean | 9.840 | 0.115 | 0.066 | 9.710 | 9.927 | 0.7565 |
| D | DVF | UL5 | D | 3 | P Mean | 9.857 | 0.129 | 0.074 | 9.760 | 10.003 | |
| D | DVF | UL6 | AX | 3 | W Mean | -1.436 | 0.048 | 0.028 | -1.488 | -1.394 | 0.703 |
| D | DVF | UL6 | AX | 2 | P Mean | -1.523 | 0.339 | 0.240 | -1.762 | -1.283 | |
| D | DVF | UL6 | AY | 3 | W Mean | 9.040 | 0.174 | 0.10 | 8.848 | 9.189 | 0.0808 |

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| D | DVF | UL6 | AY | 2 | P Mean | 8.615 | 0.168 | 0.119 | 8.496 | 8.734 | |
| D | DVF | UL6 | BX | 3 | W Mean | 0.703 | 0.074 | 0.043 | 0.627 | 0.775 | 0.728 |
| D | DVF | UL6 | BX | 2 | P Mean | 0.631 | 0.298 | 0.211 | 0.420 | 0.841 | |
| D | DVF | UL6 | BY | 3 | W Mean | 9.107 | 0.144 | 0.083 | 8.993 | 9.269 | 0.1073 |
| D | DVF | UL6 | BY | 2 | P Mean | 8.770 | 0.108 | 0.077 | 8.693 | 8.846 | |
| D | DVF | UL6 | C | 3 | W Mean | 7.637 | 0.065 | 0.038 | 7.563 | 7.687 | 0.782 |
| D | DVF | UL6 | C | 2 | P Mean | 7.640 | 0.028 | 0.020 | 7.620 | 7.660 | |
| D | DVF | UL6 | D | 3 | W Mean | 7.954 | 0.099 | 0.057 | 7.870 | 8.063 | 0.4744 |
| D | DVF | UL6 | D | 2 | P Mean | 8.087 | 0.212 | 0.150 | 7.937 | 8.237 | |
| D | DVF | UR1 | AX | 3 | W Mean | 3.799 | 0.235 | 0.135 | 3.584 | 4.049 | 0.524 |
| D | DVF | UR1 | AX | 3 | P Mean | 3.875 | 0.316 | 0.182 | 3.512 | 4.084 | |
| D | DVF | UR1 | AY | 3 | W Mean | 10.808 | 0.538 | 0.310 | 10.382 | 11.412 | 0.5039 |
| D | DVF | UR1 | AY | 3 | P Mean | 11.071 | 0.631 | 0.364 | 10.354 | 11.543 | |
| D | DVF | UR1 | BX | 3 | W Mean | 5.505 | 0.318 | 0.184 | 5.138 | 5.694 | 0.732 |
| D | DVF | UR1 | BX | 3 | P Mean | 5.536 | 0.420 | 0.242 | 5.064 | 5.867 | |
| D | DVF | UR1 | BY | 3 | W Mean | 10.773 | 0.550 | 0.318 | 10.328 | 11.388 | 0.494 |
| D | DVF | UR1 | BY | 3 | P Mean | 11.044 | 0.629 | 0.363 | 10.332 | 11.525 | |
| D | DVF | UR1 | C | 3 | W Mean | 13.373 | 0.120 | 0.069 | 13.237 | 13.463 | 0.598 |
| D | DVF | UR1 | C | 3 | P Mean | 13.324 | 0.039 | 0.022 | 13.283 | 13.360 | |
| D | DVF | UR1 | D | 3 | W Mean | 13.342 | 0.058 | 0.033 | 13.277 | 13.387 | 0.414 |
| D | DVF | UR1 | D | 3 | P Mean | 13.242 | 0.129 | 0.075 | 13.100 | 13.353 | |
| D | DVF | UR2 | AX | 3 | W Mean | 7.365 | 0.318 | 0.184 | 7.109 | 7.721 | 0.326 |
| D | DVF | UR2 | AX | 3 | P Mean | 7.419 | 0.319 | 0.184 | 7.230 | 7.788 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| D | DVF | UR2 | AY | 3 | W Mean | 11.757 | 0.135 | 0.078 | 11.614 | 11.881 | 0.4392 |
| D | DVF | UR2 | AY | 3 | P Mean | 12.064 | 0.661 | 0.382 | 11.645 | 12.826 | |
| D | DVF | UR2 | BX | 3 | W Mean | 8.385 | 0.299 | 0.173 | 8.129 | 8.714 | 0.310 |
| D | DVF | UR2 | BX | 3 | P Mean | 8.458 | 0.297 | 0.172 | 8.286 | 8.801 | |
| D | DVF | UR2 | BY | 3 | W Mean | 11.818 | 0.175 | 0.101 | 11.618 | 11.942 | 0.4593 |
| D | DVF | UR2 | BY | 3 | P Mean | 12.112 | 0.672 | 0.388 | 11.632 | 12.880 | |
| D | DVF | UR2 | C | 3 | W Mean | 13.700 | 0.078 | 0.045 | 13.610 | 13.750 | 0.196 |
| D | DVF | UR2 | C | 3 | P Mean | 13.634 | 0.020 | 0.012 | 13.613 | 13.653 | |
| D | DVF | UR2 | D | 3 | W Mean | 13.664 | 0.110 | 0.063 | 13.543 | 13.757 | 0.0887 |
| D | DVF | UR2 | D | 3 | P Mean | 13.586 | 0.088 | 0.051 | 13.507 | 13.680 | |
| D | DVF | UR3 | AX | 3 | W Mean | 9.710 | 0.243 | 0.141 | 9.543 | 9.989 | 0.516 |
| D | DVF | UR3 | AX | 3 | P Mean | 9.782 | 0.152 | 0.088 | 9.625 | 9.928 | |
| D | DVF | UR3 | AY | 3 | W Mean | 10.754 | 0.143 | 0.083 | 10.592 | 10.865 | 0.389 |
| D | DVF | UR3 | AY | 3 | P Mean | 10.985 | 0.231 | 0.133 | 10.815 | 11.248 | |
| D | DVF | UR3 | BX | 3 | W Mean | 11.009 | 0.227 | 0.131 | 10.868 | 11.271 | 0.538 |
| D | DVF | UR3 | BX | 3 | P Mean | 11.076 | 0.169 | 0.097 | 10.892 | 11.223 | |
| D | DVF | UR3 | BY | 3 | W Mean | 10.785 | 0.146 | 0.085 | 10.617 | 10.887 | 0.439 |
| D | DVF | UR3 | BY | 3 | P Mean | 11.012 | 0.268 | 0.155 | 10.818 | 11.318 | |
| D | DVF | UR3 | C | 3 | W Mean | 11.873 | 0.136 | 0.078 | 11.723 | 11.987 | 0.619 |
| D | DVF | UR3 | C | 3 | P Mean | 11.827 | 0.044 | 0.025 | 11.797 | 11.877 | |
| D | DVF | UR3 | D | 3 | W Mean | 12.016 | 0.146 | 0.084 | 11.847 | 12.103 | 0.4946 |
| D | DVF | UR3 | D | 3 | P Mean | 11.960 | 0.062 | 0.036 | 11.913 | 12.030 | |
| D | DVF | UR4 | AX | 3 | W Mean | 8.637 | 0.142 | 0.082 | 8.473 | 8.730 | 0.838 |
| D | DVF | UR4 | AX | 3 | P Mean | 8.659 | 0.054 | 0.03 | 8.598 | 8.697 | |

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| D | DVF | UR4 | AY | 3 | W Mean | 11.896 | 0.048 | 0.028 | 11.854 | 11.948 | 0.7509 |
| D | DVF | UR4 | AY | 3 | P Mean | 11.931 | 0.172 | 0.099 | 11.762 | 12.106 | |
| D | DVF | UR4 | BX | 3 | W Mean | 9.784 | 0.114 | 0.066 | 9.653 | 9.857 | 0.923 |
| D | DVF | UR4 | BX | 3 | P Mean | 9.793 | 0.036 | 0.021 | 9.753 | 9.821 | |
| D | DVF | UR4 | BY | 3 | W Mean | 11.960 | 0.075 | 0.044 | 11.910 | 12.047 | 0.7564 |
| D | DVF | UR4 | BY | 3 | P Mean | 11.999 | 0.185 | 0.107 | 11.806 | 12.174 | |
| D | DVF | UR4 | C | 3 | W Mean | 9.868 | 0.065 | 0.038 | 9.807 | 9.937 | 0.226 |
| D | DVF | UR4 | C | 3 | P Mean | 9.731 | 0.176 | 0.102 | 9.530 | 9.857 | |
| D | DVF | UR4 | D | 3 | W Mean | 9.545 | 0.086 | 0.050 | 9.447 | 9.610 | 0.1256 |
| D | DVF | UR4 | D | 3 | P Mean | 9.461 | 0.139 | 0.081 | 9.300 | 9.543 | |
| D | DVF | UR5 | AX | 3 | W Mean | 6.482 | 0.182 | 0.105 | 6.285 | 6.645 | 0.780 |
| D | DVF | UR5 | AX | 3 | P Mean | 6.528 | 0.338 | 0.195 | 6.175 | 6.848 | |
| D | DVF | UR5 | AY | 3 | W Mean | 9.712 | 0.276 | 0.159 | 9.406 | 9.941 | 0.0834 |
| D | DVF | UR5 | AY | 3 | P Mean | 9.625 | 0.271 | 0.157 | 9.343 | 9.884 | |
| D | DVF | UR5 | BX | 3 | W Mean | 7.707 | 0.156 | 0.090 | 7.545 | 7.856 | 0.862 |
| D | DVF | UR5 | BX | 3 | P Mean | 7.731 | 0.277 | 0.160 | 7.439 | 7.990 | |
| D | DVF | UR5 | BY | 3 | W Mean | 9.613 | 0.321 | 0.185 | 9.256 | 9.877 | 0.0018 * |
| D | DVF | UR5 | BY | 3 | P Mean | 9.537 | 0.315 | 0.182 | 9.187 | 9.798 | |
| D | DVF | UR5 | C | 3 | W Mean | 9.584 | 0.076 | 0.044 | 9.497 | 9.637 | 0.0267 * |
| D | DVF | UR5 | C | 3 | P Mean | 9.416 | 0.048 | 0.028 | 9.377 | 9.470 | |
| D | DVF | UR5 | D | 3 | W Mean | 9.699 | 0.055 | 0.032 | 9.637 | 9.743 | 0.0003 * |
| D | DVF | UR5 | D | 3 | P Mean | 9.551 | 0.051 | 0.030 | 9.493 | 9.590 | |
| D | DVF | UR6 | AX | 3 | W Mean | 8.738 | 0.069 | 0.040 | 8.659 | 8.782 | 0.446 |

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| D | DVF | UR6 | AX | 3 | P Mean | 8.811 | 0.072 | 0.042 | 8.737 | 8.881 | |
| D | DVF | UR6 | AY | 3 | W Mean | 8.217 | 0.166 | 0.096 | 8.073 | 8.398 | 0.8312 |
| D | DVF | UR6 | AY | 3 | P Mean | 8.186 | 0.087 | 0.050 | 8.109 | 8.281 | |
| D | DVF | UR6 | BX | 3 | W Mean | 10.833 | 0.056 | 0.033 | 10.769 | 10.874 | 0.232 |
| D | DVF | UR6 | BX | 3 | P Mean | 10.929 | 0.060 | 0.035 | 10.859 | 10.965 | |
| D | DVF | UR6 | BY | 3 | W Mean | 8.087 | 0.220 | 0.127 | 7.958 | 8.341 | 0.9408 |
| D | DVF | UR6 | BY | 3 | P Mean | 8.076 | 0.108 | 0.062 | 7.963 | 8.177 | |
| D | DVF | UR6 | C | 3 | W Mean | 7.446 | 0.049 | 0.028 | 7.413 | 7.503 | 0.0081 * |
| D | DVF | UR6 | C | 3 | P Mean | 7.321 | 0.068 | 0.040 | 7.280 | 7.400 | |
| D | DVF | UR6 | D | 3 | W Mean | 7.889 | 0.031 | 0.018 | 7.853 | 7.910 | 0.0192 * |
| D | DVF | UR6 | D | 3 | P Mean | 7.785 | 0.016 | 0.009 | 7.773 | 7.803 | |
| D | PVSP | UL1 | AX | 3 | W Mean | 2.693 | 0.221 | 0.128 | 2.515 | 2.941 | 0.979 |
| D | PVSP | UL1 | AX | 3 | P Mean | 2.689 | 0.285 | 0.164 | 2.395 | 2.963 | |
| D | PVSP | UL1 | AY | 3 | W Mean | 12.502 | 0.129 | 0.075 | 12.363 | 12.619 | 0.9658 |
| D | PVSP | UL1 | AY | 3 | P Mean | 12.512 | 0.308 | 0.178 | 12.240 | 12.847 | |
| D | PVSP | UL1 | BX | 3 | W Mean | 4.303 | 0.256 | 0.148 | 4.154 | 4.599 | 0.868 |
| D | PVSP | UL1 | BX | 3 | P Mean | 4.281 | 0.332 | 0.192 | 3.922 | 4.578 | |
| D | PVSP | UL1 | BY | 3 | W Mean | 12.534 | 0.119 | 0.069 | 12.403 | 12.637 | 0.9854 |
| D | PVSP | UL1 | BY | 3 | P Mean | 12.538 | 0.315 | 0.182 | 12.235 | 12.864 | |
| D | PVSP | UL1 | C | 3 | W Mean | 13.114 | 0.087 | 0.050 | 13.017 | 13.187 | 0.134 |
| D | PVSP | UL1 | C | 3 | P Mean | 13.039 | 0.128 | 0.074 | 12.917 | 13.173 | |
| D | PVSP | UL1 | D | 3 | W Mean | 13.113 | 0.103 | 0.059 | 12.997 | 13.193 | 0.072 |
| D | PVSP | UL1 | D | 3 | P Mean | 12.997 | 0.133 | 0.077 | 12.873 | 13.137 | |
| D | PVSP | UL2 | AX | 3 | W Mean | 0.051 | 0.212 | 0.12 | -0.163 | 0.261 | 0.517 |

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| D | PVSP | UL2 | AX | 3 | P Mean | 0.079 | 0.263 | 0.152 | -0.163 | 0.359 | |
| D | PVSP | UL2 | AY | 3 | W Mean | 9.918 | 0.213 | 0.123 | 9.691 | 10.112 | 0.8616 |
| D | PVSP | UL2 | AY | 3 | P Mean | 9.929 | 0.139 | 0.080 | 9.812 | 10.083 | |
| D | PVSP | UL2 | BX | 3 | W Mean | 1.082 | 0.178 | 0.103 | 0.930 | 1.278 | 0.707 |
| D | PVSP | UL2 | BX | 3 | P Mean | 1.099 | 0.243 | 0.140 | 0.920 | 1.376 | |
| D | PVSP | UL2 | BY | 3 | W Mean | 9.914 | 0.170 | 0.098 | 9.730 | 10.065 | 0.9758 |
| D | PVSP | UL2 | BY | 3 | P Mean | 9.912 | 0.110 | 0.064 | 9.823 | 10.035 | |
| D | PVSP | UL2 | C | 3 | W Mean | 13.731 | 0.105 | 0.061 | 13.610 | 13.793 | 0.556 |
| D | PVSP | UL2 | C | 3 | P Mean | 13.680 | 0.178 | 0.103 | 13.530 | 13.877 | |
| D | PVSP | UL2 | D | 3 | W Mean | 13.417 | 0.074 | 0.043 | 13.350 | 13.497 | 0.3204 |
| D | PVSP | UL2 | D | 3 | P Mean | 13.365 | 0.134 | 0.077 | 13.283 | 13.520 | |
| D | PVSP | UL3 | AX | 3 | W Mean | 0.494 | 0.554 | 0.320 | -0.083 | 1.022 | 0.670 |
| D | PVSP | UL3 | AX | 3 | P Mean | 0.460 | 0.616 | 0.356 | -0.225 | 0.968 | |
| D | PVSP | UL3 | AY | 3 | W Mean | 11.447 | 0.134 | 0.077 | 11.342 | 11.598 | 0.0366 * |
| D | PVSP | UL3 | AY | 3 | P Mean | 11.315 | 0.153 | 0.088 | 11.163 | 11.469 | |
| D | PVSP | UL3 | BX | 3 | W Mean | 1.755 | 0.550 | 0.318 | 1.173 | 2.266 | 0.534 |
| D | PVSP | UL3 | BX | 3 | P Mean | 1.714 | 0.583 | 0.337 | 1.063 | 2.187 | |
| D | PVSP | UL3 | BY | 3 | W Mean | 11.325 | 0.169 | 0.097 | 11.150 | 11.487 | 0.0281 * |
| D | PVSP | UL3 | BY | 3 | P Mean | 11.176 | 0.208 | 0.120 | 10.950 | 11.361 | |
| D | PVSP | UL3 | C | 3 | W Mean | 11.978 | 0.094 | 0.054 | 11.870 | 12.037 | 0.555 |
| D | PVSP | UL3 | C | 3 | P Mean | 11.929 | 0.092 | 0.053 | 11.850 | 12.030 | |
| D | PVSP | UL3 | D | 3 | W Mean | 12.208 | 0.016 | 0.009 | 12.190 | 12.217 | 0.8616 |
| D | PVSP | UL3 | D | 3 | P Mean | 12.199 | 0.073 | 0.042 | 12.117 | 12.257 | |

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| D | PVSP | UL4 | AX | 3 | W Mean | -1.064 | 0.265 | 0.153 | -1.334 | -0.805 | 0.917 |
| D | PVSP | UL4 | AX | 3 | P Mean | -1.069 | 0.197 | 0.114 | -1.286 | -0.900 | |
| D | PVSP | UL4 | AY | 3 | W Mean | 10.810 | 0.319 | 0.184 | 10.442 | 11.004 | 0.3385 |
| D | PVSP | UL4 | AY | 3 | P Mean | 10.738 | 0.222 | 0.128 | 10.484 | 10.890 | |
| D | PVSP | UL4 | BX | 3 | W Mean | 0.225 | 0.178 | 0.103 | 0.028 | 0.374 | 0.720 |
| D | PVSP | UL4 | BX | 3 | P Mean | 0.231 | 0.197 | 0.114 | 0.009 | 0.384 | |
| D | PVSP | UL4 | BY | 3 | W Mean | 10.752 | 0.304 | 0.176 | 10.402 | 10.952 | 0.3409 |
| D | PVSP | UL4 | BY | 3 | P Mean | 10.673 | 0.198 | 0.114 | 10.445 | 10.795 | |
| D | PVSP | UL4 | C | 3 | W Mean | 10.071 | 0.011 | 0.006 | 10.063 | 10.083 | 0.109 |
| D | PVSP | UL4 | C | 3 | P Mean | 10.001 | 0.034 | 0.019 | 9.970 | 10.037 | |
| D | PVSP | UL4 | D | 3 | W Mean | 10.036 | 0.051 | 0.029 | 9.980 | 10.080 | 0.1564 |
| D | PVSP | UL4 | D | 3 | P Mean | 10.006 | 0.070 | 0.040 | 9.937 | 10.077 | |
| D | PVSP | UL5 | AX | 3 | W Mean | -3.093 | 0.168 | 0.097 | -3.268 | -2.934 | 0.379 |
| D | PVSP | UL5 | AX | 3 | P Mean | -3.136 | 0.221 | 0.127 | -3.384 | -2.961 | |
| D | PVSP | UL5 | AY | 3 | W Mean | 11.264 | 0.248 | 0.143 | 11.072 | 11.544 | 0.3656 |
| D | PVSP | UL5 | AY | 3 | P Mean | 11.172 | 0.384 | 0.222 | 10.899 | 11.611 | |
| D | PVSP | UL5 | BX | 3 | W Mean | -1.788 | 0.265 | 0.153 | -2.081 | -1.567 | 0.0426 * |
| D | PVSP | UL5 | BX | 3 | P Mean | -1.897 | 0.255 | 0.147 | -2.189 | -1.718 | |
| D | PVSP | UL5 | BY | 3 | W Mean | 11.199 | 0.230 | 0.133 | 11.011 | 11.455 | 0.3217 |
| D | PVSP | UL5 | BY | 3 | P Mean | 11.084 | 0.378 | 0.218 | 10.817 | 11.516 | |
| D | PVSP | UL5 | C | 3 | W Mean | 9.905 | 0.034 | 0.019 | 9.873 | 9.940 | 0.205 |
| D | PVSP | UL5 | C | 3 | P Mean | 9.873 | 0.062 | 0.036 | 9.807 | 9.930 | |
| D | PVSP | UL5 | D | 3 | W Mean | 9.851 | 0.050 | 0.029 | 9.813 | 9.907 | 0.0034 * |
| D | PVSP | UL5 | D | 3 | P Mean | 9.799 | 0.047 | 0.02 | 9.767 | 9.853 | |

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| D | PVSP | UL6 | AX | 3 | W Mean | -1.098 | 0.346 | 0.200 | -1.497 | -0.880 | 0.0381 * |
| D | PVSP | UL6 | AX | 3 | P Mean | -1.168 | 0.363 | 0.209 | -1.587 | -0.959 | |
| D | PVSP | UL6 | AY | 3 | W Mean | 8.672 | 0.235 | 0.135 | 8.401 | 8.814 | 0.6683 |
| D | PVSP | UL6 | AY | 3 | P Mean | 8.622 | 0.163 | 0.094 | 8.499 | 8.807 | |
| D | PVSP | UL6 | BX | 3 | W Mean | 0.977 | 0.298 | 0.172 | 0.633 | 1.152 | 0.057 |
| D | PVSP | UL6 | BX | 3 | P Mean | 0.907 | 0.327 | 0.189 | 0.530 | 1.103 | |
| D | PVSP | UL6 | BY | 3 | W Mean | 8.682 | 0.143 | 0.083 | 8.532 | 8.817 | 0.5148 |
| D | PVSP | UL6 | BY | 3 | P Mean | 8.612 | 0.102 | 0.059 | 8.501 | 8.702 | |
| D | PVSP | UL6 | C | 3 | W Mean | 7.688 | 0.112 | 0.065 | 7.620 | 7.817 | 0.267 |
| D | PVSP | UL6 | C | 3 | P Mean | 7.509 | 0.233 | 0.135 | 7.240 | 7.647 | |
| D | PVSP | UL6 | D | 3 | W Mean | 7.930 | 0.026 | 0.015 | 7.913 | 7.960 | 0.0442 * |
| D | PVSP | UL6 | D | 3 | P Mean | 7.797 | 0.062 | 0.036 | 7.727 | 7.847 | |
| D | PVSP | UR1 | AX | 3 | W Mean | 4.026 | 0.183 | 0.106 | 3.822 | 4.175 | 0.731 |
| D | PVSP | UR1 | AX | 3 | P Mean | 4.037 | 0.228 | 0.132 | 3.781 | 4.220 | |
| D | PVSP | UR1 | AY | 3 | W Mean | 10.716 | 0.022 | 0.012 | 10.694 | 10.737 | 0.1279 |
| D | PVSP | UR1 | AY | 3 | P Mean | 10.906 | 0.122 | 0.070 | 10.773 | 11.012 | |
| D | PVSP | UR1 | BX | 3 | W Mean | 5.643 | 0.186 | 0.108 | 5.428 | 5.764 | 0.937 |
| D | PVSP | UR1 | BX | 3 | P Mean | 5.646 | 0.252 | 0.145 | 5.362 | 5.841 | |
| D | PVSP | UR1 | BY | 3 | W Mean | 10.613 | 0.049 | 0.028 | 10.581 | 10.669 | 0.1286 |
| D | PVSP | UR1 | BY | 3 | P Mean | 10.782 | 0.137 | 0.079 | 10.623 | 10.863 | |
| D | PVSP | UR1 | C | 3 | W Mean | 13.339 | 0.107 | 0.062 | 13.220 | 13.427 | 0.104 |
| D | PVSP | UR1 | C | 3 | P Mean | 13.239 | 0.114 | 0.066 | 13.150 | 13.367 | |
| D | PVSP | UR1 | D | 3 | W Mean | 13.421 | 0.120 | 0.069 | 13.283 | 13.503 | 0.1484 |

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| D | PVSP | UR1 | D | 3 | P Mean | 13.280 | 0.159 | 0.092 | 13.157 | 13.460 | |
| D | PVSP | UR2 | AX | 3 | W Mean | 7.435 | 0.096 | 0.055 | 7.346 | 7.536 | 0.287 |
| D | PVSP | UR2 | AX | 3 | P Mean | 7.485 | 0.155 | 0.089 | 7.357 | 7.657 | |
| D | PVSP | UR2 | AY | 3 | W Mean | 11.779 | 0.246 | 0.142 | 11.497 | 11.948 | 0.0475 * |
| D | PVSP | UR2 | AY | 3 | P Mean | 11.948 | 0.233 | 0.135 | 11.682 | 12.118 | |
| D | PVSP | UR2 | BX | 3 | W Mean | 8.485 | 0.132 | 0.076 | 8.397 | 8.637 | 0.210 |
| D | PVSP | UR2 | BX | 3 | P Mean | 8.530 | 0.174 | 0.100 | 8.428 | 8.730 | |
| D | PVSP | UR2 | BY | 3 | W Mean | 11.745 | 0.257 | 0.148 | 11.459 | 11.955 | 0.0393 * |
| D | PVSP | UR2 | BY | 3 | P Mean | 11.912 | 0.220 | 0.127 | 11.659 | 12.054 | |
| D | PVSP | UR2 | C | 3 | W Mean | 13.716 | 0.114 | 0.066 | 13.600 | 13.827 | 0.479 |
| D | PVSP | UR2 | C | 3 | P Mean | 13.661 | 0.076 | 0.044 | 13.593 | 13.743 | |
| D | PVSP | UR2 | D | 3 | W Mean | 13.643 | 0.037 | 0.021 | 13.610 | 13.683 | 0.1894 |
| D | PVSP | UR2 | D | 3 | P Mean | 13.561 | 0.036 | 0.021 | 13.520 | 13.587 | |
| D | PVSP | UR3 | AX | 3 | W Mean | 9.714 | 0.411 | 0.237 | 9.395 | 10.177 | 0.322 |
| D | PVSP | UR3 | AX | 3 | P Mean | 9.665 | 0.357 | 0.206 | 9.360 | 10.057 | |
| D | PVSP | UR3 | AY | 3 | W Mean | 10.856 | 0.567 | 0.327 | 10.320 | 11.449 | 0.8979 |
| D | PVSP | UR3 | AY | 3 | P Mean | 10.837 | 0.356 | 0.206 | 10.472 | 11.184 | |
| D | PVSP | UR3 | BX | 3 | W Mean | 11.011 | 0.358 | 0.207 | 10.760 | 11.421 | 0.441 |
| D | PVSP | UR3 | BX | 3 | P Mean | 10.967 | 0.280 | 0.162 | 10.757 | 11.285 | |
| D | PVSP | UR3 | BY | 3 | W Mean | 10.830 | 0.570 | 0.329 | 10.257 | 11.396 | 0.9434 |
| D | PVSP | UR3 | BY | 3 | P Mean | 10.820 | 0.395 | 0.228 | 10.384 | 11.155 | |
| D | PVSP | UR3 | C | 3 | W Mean | 11.811 | 0.164 | 0.095 | 11.637 | 11.963 | 0.585 |
| D | PVSP | UR3 | C | 3 | P Mean | 11.733 | 0.123 | 0.071 | 11.643 | 11.873 | |
| D | PVSP | UR3 | D | 3 | W Mean | 12.00 | 0.165 | 0.09 | 11.82 | 12.15 | 0.5311 |

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| D | PVSP | UR3 | D | 3 | P Mean | 11.920 | 0.077 | 0.045 | 11.860 | 12.007 | |
| D | PVSP | UR4 | AX | 3 | W Mean | 8.319 | 0.323 | 0.187 | 7.954 | 8.570 | 0.098 |
| D | PVSP | UR4 | AX | 3 | P Mean | 8.413 | 0.291 | 0.168 | 8.099 | 8.674 | |
| D | PVSP | UR4 | AY | 3 | W Mean | 11.933 | 0.119 | 0.069 | 11.798 | 12.022 | 0.5749 |
| D | PVSP | UR4 | AY | 3 | P Mean | 11.967 | 0.119 | 0.069 | 11.884 | 12.103 | |
| D | PVSP | UR4 | BX | 3 | W Mean | 9.543 | 0.270 | 0.156 | 9.238 | 9.753 | 0.062 |
| D | PVSP | UR4 | BX | 3 | P Mean | 9.616 | 0.252 | 0.146 | 9.340 | 9.834 | |
| D | PVSP | UR4 | BY | 3 | W Mean | 11.948 | 0.136 | 0.078 | 11.794 | 12.051 | 0.5131 |
| D | PVSP | UR4 | BY | 3 | P Mean | 11.984 | 0.127 | 0.073 | 11.884 | 12.127 | |
| D | PVSP | UR4 | C | 3 | W Mean | 9.819 | 0.023 | 0.013 | 9.797 | 9.843 | 0.214 |
| D | PVSP | UR4 | C | 3 | P Mean | 9.741 | 0.063 | 0.036 | 9.687 | 9.810 | |
| D | PVSP | UR4 | D | 3 | W Mean | 9.455 | 0.065 | 0.038 | 9.400 | 9.527 | 0.2181 |
| D | PVSP | UR4 | D | 3 | P Mean | 9.363 | 0.029 | 0.017 | 9.333 | 9.390 | |
| D | PVSP | UR5 | AX | 3 | W Mean | 6.267 | 0.237 | 0.137 | 5.993 | 6.409 | 0.193 |
| D | PVSP | UR5 | AX | 3 | P Mean | 6.311 | 0.204 | 0.118 | 6.077 | 6.444 | |
| D | PVSP | UR5 | AY | 3 | W Mean | 9.585 | 0.370 | 0.213 | 9.218 | 9.957 | 0.4798 |
| D | PVSP | UR5 | AY | 3 | P Mean | 9.651 | 0.500 | 0.289 | 9.169 | 10.167 | |
| D | PVSP | UR5 | BX | 3 | W Mean | 7.526 | 0.169 | 0.098 | 7.331 | 7.629 | 0.216 |
| D | PVSP | UR5 | BX | 3 | P Mean | 7.593 | 0.181 | 0.104 | 7.396 | 7.751 | |
| D | PVSP | UR5 | BY | 3 | W Mean | 9.501 | 0.397 | 0.229 | 9.106 | 9.900 | 0.5093 |
| D | PVSP | UR5 | BY | 3 | P Mean | 9.559 | 0.519 | 0.300 | 9.058 | 10.095 | |
| D | PVSP | UR5 | C | 3 | W Mean | 9.611 | 0.077 | 0.044 | 9.533 | 9.687 | 0.083 |
| D | PVSP | UR5 | C | 3 | P Mean | 9.482 | 0.032 | 0.018 | 9.450 | 9.513 | |

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| D | PVSP | UR5 | D | 3 | W Mean | 9.639 | 0.077 | 0.044 | 9.587 | 9.727 | 0.1586 |
| D | PVSP | UR5 | D | 3 | P Mean | 9.516 | 0.129 | 0.075 | 9.367 | 9.603 | |
| D | PVSP | UR6 | AX | 3 | W Mean | 8.666 | 0.145 | 0.083 | 8.515 | 8.803 | 0.703 |
| D | PVSP | UR6 | AX | 3 | P Mean | 8.683 | 0.121 | 0.070 | 8.544 | 8.759 | |
| D | PVSP | UR6 | AY | 3 | W Mean | 7.933 | 0.660 | 0.381 | 7.529 | 8.695 | 0.1056 |
| D | PVSP | UR6 | AY | 3 | P Mean | 8.067 | 0.740 | 0.427 | 7.634 | 8.921 | |
| D | PVSP | UR6 | BX | 3 | W Mean | 10.766 | 0.146 | 0.084 | 10.628 | 10.918 | 0.489 |
| D | PVSP | UR6 | BX | 3 | P Mean | 10.805 | 0.101 | 0.059 | 10.688 | 10.868 | |
| D | PVSP | UR6 | BY | 3 | W Mean | 7.930 | 0.571 | 0.330 | 7.504 | 8.579 | 0.1638 |
| D | PVSP | UR6 | BY | 3 | P Mean | 8.082 | 0.693 | 0.400 | 7.557 | 8.868 | |
| D | PVSP | UR6 | C | 3 | W Mean | 7.393 | 0.100 | 0.058 | 7.290 | 7.490 | 0.447 |
| D | PVSP | UR6 | C | 3 | P Mean | 7.353 | 0.100 | 0.058 | 7.243 | 7.437 | |
| D | PVSP | UR6 | D | 3 | W Mean | 7.854 | 0.063 | 0.037 | 7.787 | 7.913 | 0.1095 |
| D | PVSP | UR6 | D | 3 | P Mean | 7.809 | 0.086 | 0.049 | 7.730 | 7.900 | |