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Hot Mix Asphalt Gyratory 39/40
Final Report Date: 8/20/2015

PSP Enrollment #3879
University of Arkansas
Fayetteville, Arkansas USA

Submitted by sgwill@uark.edu on 7/2/2015 at 10:46 AM

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The Z-Score indicates the number of standard deviations from the average value. The Z-Score is determined by the following calculation:

$$Z\text{-Score} = (\text{Laboratory Test Result} - \text{Average Value}) / (\text{Standard Deviation})$$

The laboratory Rating calculation is based on the absolute value of the Z-Score (or number of standard deviations from the average). The following describes the laboratory Rating system:

- If Z-Score <= 1 Then Rating = 5
- If Z-Score > 1 And <= 1.5 Then Rating = 4
- If Z-Score > 1.5 And <= 2 Then Rating = 3
- If Z-Score > 2 And <= 2.5 Then Rating = 2
- If Z-Score > 2.5 And <= 3 Then Rating = 1
- If Z-Score > 3 Then Rating = 0

A negative sign on a Z-Score or Rating indicates that the laboratory's result was below the average, while a positive Z-Score or Rating indicates that the laboratory's result was above the average.

For more information on ratings, please review [Proficiency Sample Ratings: Being Average Has Never Been So Good](#).

Maximum Specific Gravity (Gyratory)

Maximum Specific Gravity - T209/D2041

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 39							Sample 40							Repeatability(within-lab)	
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
1	806	2.607	2.6059	0.0084	0.13	5	2.622	2.6191	0.0073	0.39	5	0.0053	0.24	5	

Bulk Specific Gravity Saturated Surface-Dry Method (Gyratory)

Bulk Specific Gravity (Saturated Surface-Dry Method) - T166/D2726

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 39							Sample 40							Repeatability(within-lab)	
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
2	790	2.367	2.3988	0.0199	-1.60	-3	2.421	2.4259	0.0184	-0.27	-5	0.0111	1.71	3	

Bulk Specific Gravity Using Vacuum Sealing Method

Bulk Specific Gravity (Vacuum Sealing Method) - T331/D6752

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 39							Sample 40							Repeatability(within-lab)	
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
3	157	2.331	2.3763	0.0233	-1.95	-3	2.393	2.4053	0.0225	-0.55	-5	0.0147	1.59	3	

Hot Mix Asphalt Superpave Gyratory Compactor

Height During Compaction after 8 gyrations (0.1 mm) - T312/D6925

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 39							Sample 40							Repeatability(within-lab)	
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
4	798	133.1	131.75	1.34	1.01	4	132.2	130.90	1.28	1.01	4	0.65	-0.06	-5	

Hot Mix Asphalt Superpave Gyratory Compactor

Height During Compaction after 100 gyrations (0.1 mm) - T312/D6925

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 39							Sample 40							Repeatability(within-lab)	
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
5	799	119.2	117.94	1.06	1.18	4	118.0	117.26	1.01	0.73	5	0.52	-0.71	-5	

Hot Mix Asphalt Superpave Gyratory Compactor

Percent of Maximum Specific Gravity after 8 gyrations (0.1 percent) - T312/D6925

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 39							Sample 40							Repeatability(within-lab)	
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
6	787	81.3	82.45	0.87	-1.31	-4	82.4	83.03	0.80	-0.78	-5	0.49	0.75	5	

Hot Mix Asphalt Superpave Gyratory Compactor

Percent of Maximum Specific Gravity after 100 gyrations (0.1 percent) - T312/D6925

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 39							Sample 40							Repeatability(within-lab)	
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
7	789	90.8	92.10	0.86	-1.51	-3	92.3	92.63	0.76	-0.44	-5	0.52	1.31	4	

** Ratings Suppressed

-- No Data Submitted or Data Out of Accepted Range



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