SUBMIT/EMAIL

Reset Form

Revised: April 28, 2023
L.Hatley
CLT ID 00186

Procedure Checklist
D1298 Density, Specific Gravity (Hydrometer)

SiteManager ID:	Date:
Technician:	QA Observer: SELECT

TEST PROCEDURE		RESULTS
1.	Bring the sample to the test temperature which shall be such that the sample is sufficiently fluid but not so high as to cause the loss of light components.	RESULTS
2.	Bring the hydrometer cylinder and thermometer to within 5°C of the test temperature.	RESULTS
3.	**What temperature should the hydrometer cylinder and thermometer be at before testing? Within 5°C of the test temperature.**	RESULTS
4.	Transfer the sample to the clean, temperature stabilized hydrometer cylinder without splashing, to avoid the formation of air bubbles.	RESULTS
5.	Remove any air bubbles formed after they have collected on the surface of the test portion, by touching them with a piece of clean filter paper before inserting hydrometer.	RESULTS
6.	**What should you do before inserting the hydrometer? Remove any air bubbles with clean filter paper.**	RESULTS
7.	Place the cylinder in a vertical position free from air currents where the temperature does not change more than 2°C during the time to complete the test.	RESULTS
8.	**How much can the temperature change during testing? Not more than 2°C**	RESULTS
9.	Insert thermometer and stir the test portion with stirring rod, using a combination of vertical and rotational motions to ensure uniform temperature.	RESULTS
10.	If a liquid-in-glass thermometer is used, this can be used as a stirring rod.	RESULTS
11.	Record the temperature of the sample to the nearest 0.1°C and remove the thermometer.	RESULTS
12.	Lower the appropriate hydrometer into the sample and release when in a position of equilibrium, taking care to avoid wetting the stem above the level at which it floats freely.	RESULTS
13.	Make sure that the hydrometer is floating freely away from the cylinder walls and that the stem is not wetted as liquid on the stem affects the readings.	RESULTS
14.	Allow sufficient time for the hydrometer to come to rest, and for all air bubbles to come to the surface. Remove any air bubbles before taking a reading.	RESULTS
15.	When the hydrometer has come to rest floating freely away from the walls of the cylinder, read the hydrometer scale to the nearest one-fifth or one-tenth of a full-scale division depending upon the number of subdivisions.	RESULTS
16.	**Record the hydrometer reading at the point on the hydrometer scale to which the sample rises above the main surface, by observing with the eye slightly above the plane of the surface of the liquid.**	RESULTS
17.	Appropriate corrections made to the observed hydrometer reading.	RESULTS
18.	Immediately after recording the hydrometer scale reading, carefully lift the hydrometer out of the liquid, insert the thermometer record the temperature test portion to the nearest 0.1°C	RESULTS
19.	If the temperature differs from the previous reading by more than 0.05°C repeat the hydrometer observation.	RESULTS
20.	Record the average of those two temperatures to the nearest 0.1°C	RESULTS
21.	Record the observed hydrometer scales to the nearest 0.1 in density.	RESULTS

***Note according to QA's Evaluation procedure the Branch Manager or Lab Supervisor will be responsible to review this evaluation report with the technician and correct any findings(s) noted, to verify that correct procedures are being followed in future testing.**

Remarks: