

### GRAIN-SIZE ANALYSIS (HYDROMETER METHOD)

1. PROJECT				2. DATE					
3. BORING NUMBER			4. SAMPLE OR SPECIMEN NUMBER			5. CLASSIFICATION			
6. DISH NUMBER			7. GRADUATE NUMBER			8. HYDROMETER NUMBER/TYPE (151H/152H)			
9. DISPERSING AGENT USED						10. QUANTITY			
11. COMPOSITE CORRECTION				12. DECIMAL FINES (Block 29, DD Form 1206)			13. SPECIFIC GRAVITY OF SOLIDS (Block 6n, DD Form 1208)      G <sub>s</sub> =		

14. TIME	15. ELAPSED TIME, (T) minutes	16. ACTUAL HYDROMETER READING (R <sup>1</sup> )	17. CORRECTED READING (R)	18. TEMP (°C)	19. TEMPERATURE AND SPECIFIC GRAVITY CONSTANT (K)	20. EFFECTIVE DEPTH (L)	21. PARTICLE DIAMETER (D), mm	22. PERCENT FINER	
								a. PARTIAL	b. TOTAL

<b>WEIGHT</b> <i>(Grams)</i>	23. DISH + DRY SOIL	<p>The particle diameter (D) is calculated from Stokes' equation using the corrected hydrometer reading. Use the following formula to solve for particle diameter (D):      <math>D = K \sqrt{L/T}</math></p> <p>Corrected hydrometer reading (R) = actual hydrometer reading (R<sup>1</sup>) + composite correction</p>
	24. DISH	
	25. DRY SOIL (W <sub>s</sub> )	

W<sub>s</sub> = Oven-dry weight (in grams) of soil used for hydrometer analysis

Hydrometer graduated in specific gravity (151H)

$$\text{Partial Percent Finer} = \left[ \frac{G_s}{G_s - 1} \frac{100,000}{W_s} \right] (R - 1)$$

Hydrometer graduated in grams per liter (152H)

$$\frac{(R)(a)}{W_s} \times 100$$

(a = specific gravity of solids correction factor)

Total Percent Finer = Partial Percent Finer x Decimal fines (Block 12)

**26. REMARKS**

**FROST GROUP:**

27. TECHNICIAN (Signature)	28. COMPUTED BY (Signature)	29. CHECKED BY (Signature)
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