

Photometric Method¹

Method 8006**(5 to 750 mg/L)****Scope and Application:** For water and wastewater.¹ Adapted from *Sewage and Industrial Wastes*, 31, 1159 (1959).

Test preparation

How to use instrument-specific information

The [Instrument-specific information](#) table displays information that may vary from instrument to instrument. Select your spectrophotometer from the instrument column on the left. Read across to find the corresponding sample cells and adapters required to perform this test on your spectrophotometer.

Table 1 Instrument-specific information

Instrument	Sample cell	Cell orientation
DR 5000	2495402	Fill line faces user
DR 3900	2495402	Fill line faces user
DR 3800, DR 2800, DR 2700	2495402	Fill line faces right

Before starting the test:

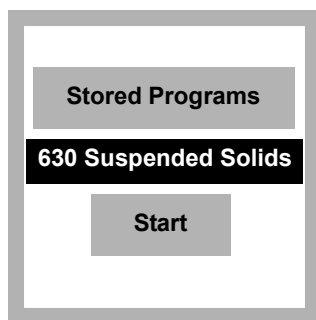
The Pour-Thru Cell cannot be used with this procedure.

Collect the following items:

Description	Quantity
Beaker, 600-mL, polypropylene	1
Blender	1
Cylinder, 500-mL polypropylene, graduated	1
Sample Cells (see the Instrument-specific information table)	2

See [Consumables and replacement items](#) for reorder information.

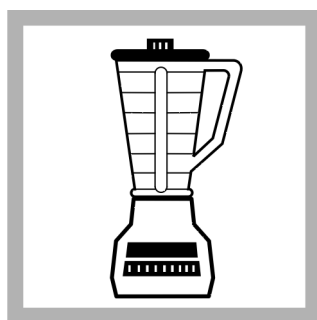
Photometric Method



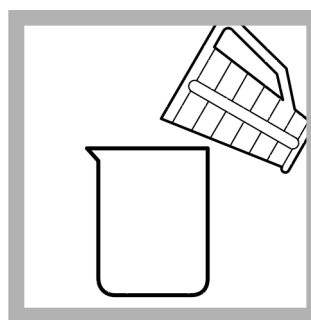
1. Select the test.

Insert an adapter if required (see the [Instrument-specific information](#) table).

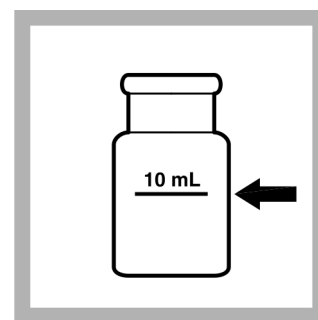
Refer to the user manual for orientation.



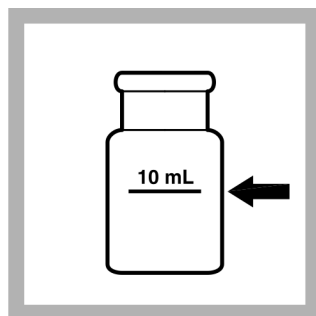
2. Blend 500 mL of sample in a blender at high speed for exactly two minutes.



3. Pour the blended sample into a 600-mL beaker.



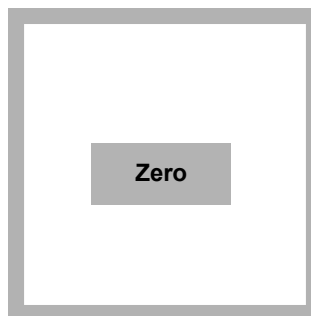
4. **Prepared Sample:** Stir the sample and immediately pour 10 mL of the blended sample into a sample cell.



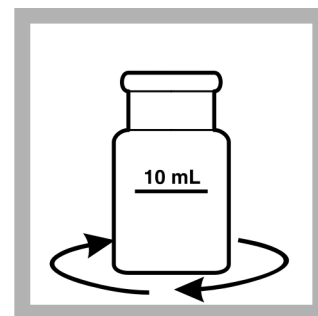
5. **Blank Preparation:** Fill a second sample cell with 10 mL of tap water or deionized water.



6. Wipe and insert the blank into the cell holder.



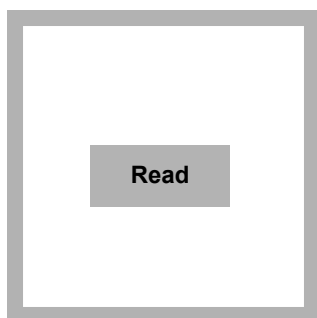
7. **ZERO** the instrument. The display will show: 0 mg/L TSS



8. Swirl the prepared sample to remove any gas bubbles and uniformly suspend any residue.



9. Wipe and insert the prepared sample into the cell holder.



10. **READ** the results in mg/L TSS.

Interferences

Samples that absorb strongly at 810 nm, such as blue dyes, may give false, high-bias readings. A user-entered calibration is advised for these samples.

Sample collection, preservation and storage

Collect samples in clean plastic or glass bottles. Analyze samples as soon as possible after collection. The sample may be stored for seven days by cooling to 4 °C (39 °F).

Accuracy check

Calibration for this test is based on parallel samples using the gravimetric technique on sewage samples from a municipal sewage plant. For most samples, this calibration will provide satisfactory results. When higher accuracy is required, run parallel spectrophotometric and gravimetric determinations with portions of the same sample. Make the new calibration on the particular sample using a gravimetric technique as a basis.

Summary of method

This method of determining suspended solids is a simple, direct measurement which does not require the filtration or ignition/weighing steps that gravimetric procedures do. The USEPA specifies the gravimetric method for solids determinations, while this method is often used for checking in-plant processes. Test results as mg/L total suspended solids (TSS) are measured at 810 nm.

Consumables and replacement items

Required apparatus

Description	Quantity	Unit	Catalog number
Beaker, 600-mL, polypropylene	1	each	108052
Blender, 1.2-L, 120 VAC	1	each	2616100
Blender, 1.2 L, 240 VAC	1	each	2616102
Cylinder, 500-mL graduated, polypropylene	1	each	108149



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