

**STANDARD TEST METHOD**

**ACETONE EXTRACTION**

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**SCOPE:**


This test is to determine the amount of acetone extractable material in a substance.

**APPARATUS:**

1. Soxhlet extraction siphon
2. 6 station electric warmer
3. 250 ml flat bottom flask
4. 28 x 100 mm extraction thimble
5. Filter paper, Whatman No 6, 15.0 cm
6. Scales (Sartorius) (Accurate to 0.0001g)
7. Drying oven, 105°C
8. Alfoil cup
9. Acetone (residue free)
10. Condenser
11. Desiccator

**PROCEDURE:**

1. Set out 6 thimbles and 6 filter papers. Number thimbles from 1 → 6 (using a pen).
2. Fold filter paper in reducing half four times, place in thimbles (point ↓).
3. Weigh and record weights at “**thimble weight**” (use Sartorius scales).
4. Remove filter paper, place on scale, zero, add the specified amount (as per B8D1 doc.) of material into the filter paper.
5. Replace filter paper in thimble, weigh and record at “**thimble and sample**”.
6. Place thimbles into evaporators (“round” the thimble for easier removal later).
7. Measure out **200 ml** of acetone into round flasks.
8. Place extraction syphons into round flasks, assemble in electric warmer, connect condenser to the top of the syphon. Turn together to seal.
- 9. Turn all pots onto ‘8’, make sure water is running, no kinks in hoses.**

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	ISS.	REVISION	DATE	DR.	AP'D
	6.	Procedure updated.	27.11.98	JS	LR
	7.	Procedure updated with more detailed steps.	13.05.99	SR	LR
	8.	Updated procedure for raw materials only.	20.12.00		
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11. Close glass doors (leave 25mm open).

12. Note start time (record on sheet) and determine time to return (record)

**\*Time for test is 2 hrs 5 mins**

13. Check oven is turned on and set at 100°C.

14. Make alfoil bowls. Weigh and record at "flask weight" (1) and (2).

15. After 2 hrs 5 mins:

- separate condensers (hold with clamps)
- remove evaporators after draining contents (liquid) into bowls and place on sink
- **turn setting to 3, allow round flasks to boil off for 15-20 mins.** Observe this step.

16. After 15-20 mins:

- - **empty round flasks into aluminium bowls (swirling contents in glass flask)**
- - place alfoil bowls in oven at 100°C, leave for 1 hour.

17. After 1 hr, remove al. bowls, **place in dessicate jar for 15 mins.**


18. Remove alfoil bowls and allow to sit for a couple of minutes.

19. **Weigh alfoil bowls and record weight, repeat weighing and record under 'flask and residue' (1) and (2).**

20. Return alfoil bowls and results sheet to requestor.

**CALCULATION:**

$$\% \text{ acetone weight} = \frac{\text{weight of residue}}{\text{weight of sample}} \times \frac{100}{1}$$

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