



Edition: BP 2025 (Ph. Eur. 11.6 update)

Activated Attapulgite

[General Notices](#)

Action and use

Antidiarrhoeal.

DEFINITION

Activated Attapulgite is a purified native hydrated magnesium aluminium silicate essentially consisting of the clay mineral palygorskite that has been carefully heated to increase its adsorptive capacity.

CHARACTERISTICS

A light, cream or buff, very fine powder, free or almost free from gritty particles.

IDENTIFICATION

- A. Ignite 0.5 g with 2 g of [anhydrous sodium carbonate](#) for 20 minutes, cool and extract with 25 mL of boiling [water](#). Cool, filter, wash the residue with [water](#) and add the washings to the filtrate. Reserve the residue for test B. Cautiously acidify the combined filtrate and washings with [hydrochloric acid](#), evaporate to dryness, moisten the residue with 0.2 mL of [hydrochloric acid](#), add 10 mL of [water](#) and stir. A white, gelatinous precipitate is produced.
- B. Wash the residue reserved in test A with [water](#) and dissolve in 10 mL of [2M hydrochloric acid](#). To 2 mL of the solution add a 10% w/v solution of [ammonium thiocyanate](#). An intense red colour is produced.
- C. To 2 mL of the solution obtained in test B add 1 mL of [strong sodium hydroxide solution](#) and filter. To the filtrate add 3 mL of [ammonium chloride solution](#). A gelatinous white precipitate is produced.
- D. To 2 mL of the solution obtained in test B add [ammonium chloride](#) and an excess of 13.5M [ammonia](#) and filter. To the filtrate add 0.15 mL of [magneson reagent](#) and an excess of 5M [sodium hydroxide](#). A blue precipitate is produced.

TESTS

Acidity or alkalinity

pH of a 5% w/v suspension in [carbon dioxide-free water](#), after shaking for 5 minutes, 7.0 to 9.5, [Appendix V L](#).

Arsenic

To 0.13 g add 5 mL of [water](#), 2 mL of [sulfuric acid](#) and 10 mL of [sulfur dioxide solution](#) and evaporate on a water bath until the sulfur dioxide solution is removed and the volume reduced to about 2 mL. Transfer the solution to the generator flask with the aid of 5 mL of [water](#). The resulting solution complies with the [limit test for arsenic](#), [Appendix VII](#) (8 ppm).

Acid-soluble matter

Boil 2 g with 100 mL of 0.2M [hydrochloric acid](#) under a reflux condenser for 5 minutes, cool and filter. Evaporate 50 mL of the filtrate to dryness. The residue, after ignition at about 600° for 30 minutes, weighs not more than 0.25 g.

Water-soluble matter

Boil 10 g with 100 mL of [water](#) under a reflux condenser for 5 minutes, cool and filter. Evaporate 50 mL of the filtrate to dryness. The residue, after ignition at 600° for 30 minutes, weighs not more than 50 mg.

Adsorptive capacity

In a stoppered bottle shake 1.0 g, in [very fine powder](#), with 50 mL of a 0.12% w/v solution of [methylene blue](#) for 5 minutes, allow to settle and centrifuge. The colour of the clear supernatant solution is not more intense than that of a 0.0012% w/v solution of [methylene blue](#).

Loss on drying

When dried to constant weight at 105°, loses not more than 4.0% of its weight. Use 1 g.

Loss on ignition

When ignited at 600°, loses not more than 9.0% of its weight. Use 1 g.