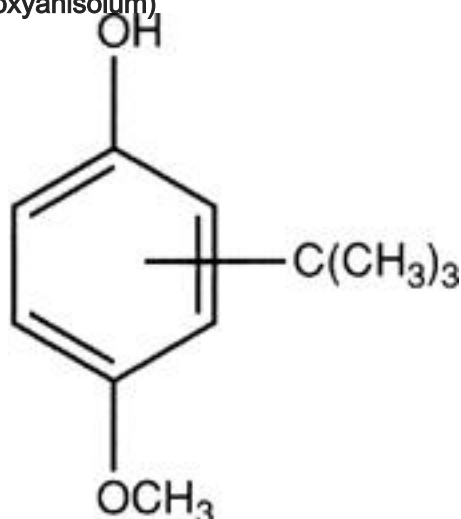


Butylated hydroxyanisole (Butylhydroxyanisolum) $C_{11}H_{16}O_2$ **Relative molecular mass.** 180.3**Chemical name.** *tert*-Butyl-4-methoxyphenol; (1,1-dimethylethyl)-4-methoxyphenol; CAS Reg. No. 25013-16-5.**Other name.** BHA.**Description.** A white or almost white, crystalline powder or a yellowish white solid; odour, faint and characteristic.**Solubility.** Practically insoluble in water; freely soluble in ethanol (~750 g/l) TS, ether R, propylene glycol R, and arachis oil R; dissolves in solutions of alkali hydroxides.**Category.** Antioxidant.**Storage.** Butylated hydroxyanisole should be kept in a well-closed container, protected from light.**Requirements****Definition.** Butylated hydroxyanisole contains a variable amount of 3-*tert*-butyl-4-methoxyphenol.**Identity tests**

A. Dissolve 0.1 g in 10 mL of ethanol (~750 g/l) TS and add 4 mL of sodium tetraborate (10 g/l) TS and 1 mL of 2,6-dichloroquinone chlorimide/ethanol TS; a blue colour is produced (distinction from butylated hydroxytoluene).

B. Dissolve a few crystals in 10 mL of ethanol (~750 g/l) TS and add 0.1 mL of potassium ferricyanide (10 g/l) TS and 0.5 mL of ferric ammonium sulfate TS₂; a green to blue colour is produced.

Solution in methanol. A solution of 1 g in 10 mL of methanol R is clear and not more intensely coloured than standard colour solution Yw3 when compared as described under [1.11 Colour of liquids](#).**Sulfated ash.** Not more than 1.0 mg/g.**Hydroquinone.** Carry out the test as described under [1.14.1 Chromatography, Thin-layer chromatography](#), using silica gel R1 as the coating substance and a mixture of 4 volumes of chloroform R and 1 volume of ethyl acetate R as the mobile phase. Apply separately to the plate 3 mL of each of two solutions in ether R containing (A) 50 mg of Butylated hydroxyanisole per mL, and (B) 0.10 mg of hydroquinone R per mL. After removing the plate from the chromatographic chamber, allow it to dry in air for a few minutes, spray with phosphomolybdic acid/ethanol TS, and while still damp expose it to the vapours of ammonia (~260 g/l) TS. Examine the chromatogram in daylight as soon as the yellow background has disappeared.

The spot obtained with solution B is more intense than any corresponding spot obtained with solution A.

3-*tert*-Butyl-4-methoxyphenol. Carry out the test as described under [1.14.1 Chromatography, Thin-layer chromatography](#), using silica gel R1 as the coating substance and chloroform R as the mobile phase. Apply separately to the plate 2 µl of each of three solutions in ether R containing (A) 25 mg of Butylated hydroxyanisole per mL, (B) 2.5 mg of Butylated hydroxyanisole per mL, and (C) 0.125 mg of Butylated hydroxyanisole per mL. After removing the plate from the chromatographic chamber, allow it to dry in air, spray it with ferric chloride/potassium ferricyanide TS, and examine the chromatogram in daylight.

The blue-violet spot at $R_f \sim 35$ obtained with solution A is not more intense than the principal spot obtained with solution B. Any

other spot obtained with solution A is not more intense than the spot obtained with solution C.