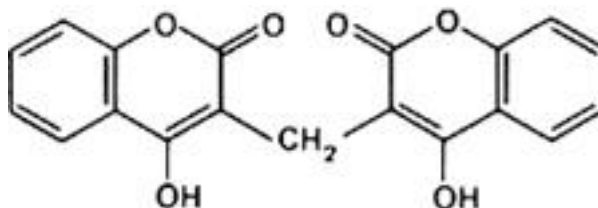


Dicoumarol (Dicoumarolum)**Molecular formula.** $C_{19}H_{12}O_6$ **Relative molecular mass.** 336.3**Graphic formula.****Chemical name.** 3,3'-Methylenebis[4-hydroxycoumarin]; 3,3'-methylenebis[4-hydroxy-2*H*-1-benzopyran-2-one]; CAS Reg. No. 66-76-2.**Description.** A white or creamy white, crystalline powder; odour, characteristic, faint.**Solubility.** Practically insoluble in water, ethanol (~750 g/l) TS and ether R.**Category.** Anticoagulant.**Storage.** Dicoumarol should be kept in a well-closed container, protected from light.**Requirements****Definition.** Dicoumarol contains not less than 98.5% and not more than 101.0% of $C_{19}H_{12}O_6$, calculated with reference to the dried substance.**Identity tests**

- Either test A alone or tests B and C may be applied.

A. Carry out the examination as described under [1.7 Spectrophotometry in the infrared region](#). The infrared absorption spectrum is concordant with the spectrum obtained from dicoumarol RS or with the *reference spectrum* of dicoumarol.

B. Fuse 0.2 g with 0.2 g of potassium hydroxide R, cool, stir with 5 mL of water, filter and acidify the filtrate with hydrochloric acid (~250 g/l) TS; a white, crystalline precipitate is obtained (salicylic acid). Retain the filtrate for test C.

C. To 1 mL of the filtrate from test B add 5 mL of water and a mixture of 1 drop of ferric chloride (25 g/l) TS and 2 drops of hydrochloric acid (~70 g/l) TS; a violet colour is produced.

Sulfated ash. Not more than 2.5 mg/g.**Loss on drying.** Dry to constant weight at 105°C; it loses not more than 5.0 mg/g.**Acidity.** Shake 0.5 g with 10 mL of carbon-dioxide-free water R for 1 minute and filter; titrate the filtrate with sodium hydroxide (0.1 mol/l) VS, methyl red/ethanol TS being used as indicator; not more than 0.1 mL is required to obtain the midpoint of the indicator (orange).**Assay.** Dissolve about 0.35 g, accurately weighed, in 40 mL of 1-butylamine R, add 5 drops of azo violet TS and titrate with lithium methoxide (0.1 mol/l) VS to a deep-blue end-point, as described under [2.6 Non-aqueous titration](#), Method B. Each mL of lithium methoxide (0.1 mol/l) VS is equivalent to 16.82 mg of $C_{19}H_{12}O_6$.