

Guaifenesin Powder

Dissolution <6.10> Weigh accurately an amount of Guaifenesin Powder, equivalent to about 0.1 g of guaifenesin ($C_{10}H_{14}O_4$), and perform the test at 50 revolutions per minute according to the Paddle method, using 900 mL of water as the dissolution medium. Start the test, withdraw not less than 20 mL of the medium at the specified minute after starting the test, and filter through a membrane filter with a pore size not exceeding 0.45 μm . Discard the first 10 mL of the filtrate, pipet 5 mL of the subsequent filtrate, add water to make exactly 20 mL, and use this solution as the sample solution. Separately, weigh accurately about 30 mg of Guaifenesin RS, previously dried at 60°C for 3 hours, and dissolve in water to make exactly 100 mL. Pipet 10 mL of this solution, add water to make exactly 100 mL, and use this solution as the standard solution. Determine the absorbances, A_T and A_S , at 273 nm of the sample solution and standard solution as directed under Ultraviolet visible Spectrophotometry <2.24>.

The requirements are met if Guaifenesin Powder conforms to the dissolution requirements.

Dissolution rate (%) with respect to the labeled amount of guaifenesin ($C_{10}H_{14}O_4$)

$$= M_S/M_T \times A_T/A_S \times 1/C \times 360$$

M_S : Amount (mg) of Guaifenesin RS

M_T : Amount (g) of sample

C : Labeled amount (mg) of guaifenesin ($C_{10}H_{14}O_4$) in 1 g

Dissolution Requirements

Labeled amount	Specified minute	Dissolution rate
500 mg/g	15 minutes	Not less than 80%