

Development of Drying Process for Removal of Residual Solvent from (+)-Dihydromyricetin

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Abstract

In this study, a drying method using ethanol pretreatment was developed that can effectively remove residual solvent from (+)-dihydromyricetin. Rotary evaporation with ethanol pretreatment was sufficient to remove residual acetone below the ICH limit (5,000 ppm for acetone). In addition, residual ethanol met the ICH-specified value (5,000 ppm) after simple rotary evaporation alone with pre-treatment with water, and residual water also met the specified value (<4%) for active pharmaceutical ingredients. At all the drying temperature (35, 45, 55 °C), a large amount of the residual solvent was initially removed during the drying, and the drying efficiency increased when increasing the drying temperature.

Key words: (+)-Dihydromyricetin; Residual solvent; Removal; Pre-treatment; Drying