

To Study the Effect of Drying Temperature Towards Extraction of Aquilaria subintegra Dry Leaves Using Vacuum Far Infrared

Authors : Tengku Muhammad Rafi Nazmi Bin Tengku Razali, Habsah Alwi

Abstract : This article based on effect of temperature towards extraction of Aquilaria Subintegra. Aquilaria Subintegra which its main habitat is in Asia-tropical and particularly often found in its native which is Thailand. There is claim which is Aquilaria Subintegra contains antipyretic properties that helps fight fever. Research nowadays also shown that paracetamol consumed bring bad effect towards consumers. This sample will first dry using Vacuum Far Infrared which provides better drying than conventional oven. Soxhlet extractor used to extract oil from sample. Gas Chromatography Mass Spectrometer used to analyze sample to determine its compound. Objective from this research was to determine the active ingredients that exist in the Aquilaria Subintegra leaves and to determine whether compound of Acetaminophen exist or not inside the leaves. Moisture content from 400C was 80%, 500C was 620% and 600C was 36%. The greater temperature resulting lower moisture content inside sample leaves. 7 components were identified in sample T=400C while only 5 components were identified in sample at T=50C and T=60C. Four components were commonly identified in three sample which is 1n-Hexadecanoic acid, 9,12,15-Octadecatrienoic acid, methyl ester (z,z,z), Vitamin E and Squalene. Further studies are needed with new series of temperature to refine the best results.

Keywords : aquilaria subintegra, vacuum far infrared, SOXHLET extractor, gas chromatography mass spectrometer, paracetamol

Conference Title : ICPCE 2015 : International Conference on Pharmacy and Chemical Engineering

Conference Location : Kuala Lumpur, Malaysia

Conference Dates : August 24-25, 2015