Acute Oral Toxicity Study of Rose Hydrosols in Rats\textsuperscript{1}

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ABSTRACT

Rose Hydrosols is also called rose water, mainly comes from extracting rose petals by steam distillation, has been widely used in essence flavor, cosmetic and drink industry. This study was performed to assess the acute oral toxicity of rose hydrosols in Sprague Dawely (SD) rats. Rose hydrosols were single administrated orally with dosages of 5000 mg/kg body weight by feeding needle and then observed for 14 days. Mortality, signs of toxicity, mean body weights, mean body weights gains, and gross necropsy findings were recorded for 14 days post treatment of rose hydrosols. No animal death was found during the study period. In male and female rats, there were no statistical differences in the mean body weights and mean body weights gains between control and rose hydrosols groups. There were no rose hydrosols treatment-related findings in hematological, serum biochemical parameters, gross necropsy and histopathology evaluation. The results show that no acute adverse toxic affects of rose hydrosols for rats of either sex and the LD\textsubscript{50} of feeding rose hydrosols in rats is over 5,000 mg/kg body weight. This is the first time that using hydrosol coming from herbs by steam distillation as the tested material for acute oral toxicity test in Taiwan, the results is valuable and could be considered when evaluating safety of the other hydrosol-related products.

Key words: rose hydrosols, acute oral toxicity, 50\% lethal dosage.

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