

## **Subacute oral toxicity of spiced heritage drink and its low-sugar version in *Sprague-Dawley* rats**

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The traditional botanical formula of spiced heritage drink (SHD) consists of 18 culinary spices, and medicinal herbs are ceremonially served as a refreshment or tonic in Southern Johor, Malaysia. A low-sugar version (LSH) was developed to cater to the needs of diabetic and weight-conscious consumers. Here we assessed its subacute toxicity and functional properties for safety and potential therapeutic information. Both SHD and LHS were administered to female rats at 3 dosages: 1.25 mL/kg (low-dose), 2.5 mL/kg (medium-dose), 5.0 mL/kg (high-dose) for 4 weeks. Clinical signs, mortality, body and organ weights, and food intake were monitored. Blood samples were collected for fasting blood glucose and hematological assessments. Subacute treatment of SHD and LHS had no significant effects on clinical signs or food intake in the animals. Still, it showed a significantly low body weight gain than the control ( $p < 0.05$ ). Measurement of hematological parameters revealed significant increments in WBC, lymphocytes, and granulocyte counts ( $p < 0.05$ ) in SHD treatment groups. Hb and RBC counts were significantly increased in both treatment groups of SHD and LHS. However, the changes were considered physiologically to be normal for rats and were not severe. Our data provide scientific evidence on the safety of SHD and LHS for potential development as functional drinks for weight management and anemia.