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Chemical composition and anti-microbial activities of the essential oil of *Adansonia digitata* stem-bark and leaf on post-harvest control of tomato spoilage

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1 Chemical Composition and Anti-microbial Activities of the Essential oil of**2 *Adansonia digitata* Stem-bark and Leaf on Post-harvest Control of Tomato Spoilage****3 *Rowland Monday Kayode¹, Christian Ugochukwu Azubuiké¹, Sunday Adeleke Laba²,****4 Adegbola Oladele Dauda¹, Mutiat Adebánke Balogun¹, and Samuel Akanbi Ajala⁴**

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12 ABSTRACT

13 The mirage of bioactive compounds in essential oil (EO) has raised its prospects as an
14 alternative to synthetic chemicals preservatives. The yields of the hydro-distilled EO
15 from the leaf and stem-bark of *Adansonia digitata* were: 0.302% and 0.403%; while
16 identified compounds were: 23 and 40 respectively. The principal chemical constituents
17 of the EO were: hydrocarbons, alkene alcohol, cyclic ketonic ether, terpenoids, amides,
18 esters. Tetramethyl-2-hexadecen-1-ol (26.31%), 8-dimethyl-2-(1-methylethenyl)
19 (8.20%), Tetracosan (6.54%), Heptacosane (5.81%) and Tetratetracontane (5.59%) were
20 dominant compounds in the leaves EO. While, the major compounds of the stem-bark EO
21 were: Octadecane (9.30%), Cyclopentane (8.81 %), 1-Octadecanesulphonyl chloride

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