Seasonal Variation and Analgesic Properties of Different Parts from
Curcuma zedoaria Roscoe (Zingiberaceae) Grown in Brazil

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This work describes the seasonal variation of curcumanol (1) and dihydrocurdione (2), two
active terpenoids from different parts (roots, mother rhizome and rugous rhizome) of Cur-
cuma zedoaria grown in Brazil. The analysis was carried out by high resolution gas chroma-
tography, using external standards for determination. The results showed that both terpe-
noids are present in all the parts studied. However, C. zedoaria exhibited about three times
more terpenoids in the mother rhizome in autumn than in other parts and seasons studied.
The antinociceptive activity of the dichloromethane extracts from different parts and col-
clected in different seasons was studied using the acetic acid-induced abdominal constriction
model in mice. The extracts obtained from mother rhizome collected in autumn and winter
at doses of 10 mg/kg body weight, i.e., caused considerable antinociceptive activity inhibiting
91.1 and 93.4% of the abdominal constrictions, respectively, whereas compounds 1 and 2
caused inhibitions of 64.0 and 46.0%, respectively. These results confirm that both com-
ponents contribute to explain the antinociceptive effect of the plant but suggest that other
compounds are also acting as analgesics.

Key words: Curcuma zedoaria, Curcumanol, Dihydrocurdione