

Title Organic & inorganic of Malaysian fragrant rice variety (MRQ74): Their antioxidant activity and total phenolic content during aging process

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Abstract

The antioxidant activity (AOA) and total phenolic content (TPC) of Malaysian fragrant rice variety (MRQ74) were evaluated. The MRQ74 were planted in two (2) different agronomy practices, namely organic & inorganic farming. These samples were evaluated in a form of milled rice (white rice). TPC was measured using Folin-Ciocalteu method while DPPH radical scavenging was used to study their AOA. Both agronomy practices showed the radical scavenging activity was ranging between 42.2% to 83.7% during 6 months of aging process. No significant differences ($p > 0.05$) were detected for organic and inorganic rice during 6 months of aging period. Same phenomenon was recorded for Total Phenolic Content. TPC reading were ranging from 108.19 GAE/100gm to 191.80 GAE/100gm. The lowest reading was recorded by Organic MRQ74 3-months of aging with 108.19 GAE/100gm samples. While the highest was recorded by Inorganic MRQ74 3-months of aging with 191.80 GAE/100gm of samples. However, these differences were not significant ($P > 0.05$). Although we could not see any significant differences between both agronomy practices and the aging process in terms of AOA & TPC characteristics, other characteristics such as nutritional compositions and sensory characteristics has shown differences in other studies.