

SP11_013_PA: SECONDARY METABOLITES PRODUCTION IN LICHEN-FORMING FUNGI OF SOME *Arthonia* SPECIES IN THAILAND

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Abstract:

Arthonia is a genus of thin crustose lichens with high diversity in morphology, chemistry, distribution, and polyphyletic clades. In our previous study, we isolated the fungal partner or lichen-forming fungi belonged to this genus, culturing on Malt-Yeast Extract media and found that their metabolites exhibited strong anti-microbial and anti-oxidant activities. The *Arthonia* sp. (RN54) showed the highest amount of bioactivities than other *Arthonia* species. This fungal is further studied for its activities by growing on various nutrient media, including jasmine rice (JR), wheat (WR), rice germ (RG), rice-berry rice (RB), and GABA rice (GB) instead of malt extract. After culturing for 3 months, secondary metabolites from these cultures were collected, extracted, and analyzed by using HPLC. The chemical profile from each rice shared the same retention time at 39 minutes and other peaks represented different profiles from each type of rice. Interestingly, substances extracted from the culture in wheat medium profiles were different from other types of rice. One of the major compounds found in their cultures was identified as 8-O-methybotryscoidin. Other main compounds and minor secondary metabolites are under future investigation.

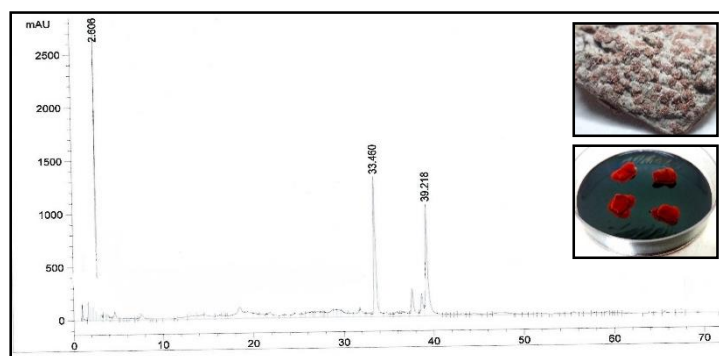


Figure 1. Chromatograms of the secondary metabolites extracted from *Arthonia* sp. (RN54) cultivated on Malt-Yeast Extract Agar.