



## SECONDARY METABOLITE ANALYSIS OF ORCHID MYCORRHIZA ANTAGONIST TEST RESULTS AGAINST ORSV

Mahfut

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### ABSTRACT

Moth orchid (*Phalaenopsis amabilis* L. (Blume)) is a native orchid originating from Indonesia. *Odontoglossum ringspot virus* (ORSV) is an important type of orchid virus and distribution area in the world, including in Indonesia. Efforts to control the spread of this disease can be done by using endurance induced mycorrhiza orchids. Several studies have shown that induced endurance can reduce the replication of ORSV, but so far no studies related to secondary metabolism analysis have been produced. Phenol is known for its secondary metabolite composition and exudate bioactivity in inducing orchid microbial resistance to pathogens. In this study, the mycorrhiza orchid used was *Ceratorhiza* sp. while the ORSV isolate used inoculum from Magelang. The orchid resistance of orchids caused by ORSV infection in Moth orchid indicates an increase in phenolic compounds in virus-infested leaves. The highest phenol content occurred in the treatment of mycorrhiza-inoculated treatment along with viruses, namely: MV, and VM, ranging between 0.097059 ppm and 0.087059 ppm, respectively. The highest concentrations of phenol were at single viral inoculation (V) and mycorrhizal (M), 0.054706 ppm and 0.037647 ppm, respectively. The lowest phenol content in plantlets not caused by mycorrhiza or inoculated virus (control) is 0.020588 ppm. These data explain that in the absence of the first mycorrhiza inoculation, the increase in total phenol content is not too high compared to viral inoculation prior to mycorrhizal inoculation. This proves that an increase in the concentration of total phenolic compounds in plantlets can increase if the plant is infected with pathogens.

**Keywords:** *Ceratorhiza*, *Induced resistance*, *Moth orchid*, *Orchid mycorrhiza*, *ORSV*, *Phenolic*



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We are pleased that you will be with us at the “International Webinar & Congress XXVI of The Indonesian Phytopathological Society” on October 28<sup>th</sup> -30, 2021

On behalf of the committee, I’m writing to confirm that your abstract entitled:

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Sincerely yours,  
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