

## **Growth Enhancement of *Desulfovibrio indonesiensis* NCIMB 13468 and *D. vulgaris* NCIMB 8303 by Aqueous Extracts of *Basella alba***

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### **Abstract**

*The influence of aqueous extracts of Basella alba on the growth of Desulfovibrio indonesiensis NCIMB 13468 and D. vulgaris NCIMB 8303 was examined. The active components of B. alba extract was determined by GC-MS. The result obtained revealed 46 components in the extract of B. alba. The 5 - 100% extract of B. alba was tested against serial dilution of D. indonesiensis and D. vulgaris. The results obtained revealed a ten times growth induction in 50-100% extracts after 1 day of growth when compared with untreated D. vulgaris and D. indonensiensis. After 2 days of growth, there was 100 times growth induction in 70 - 100 % extracts, 100 times growth induction in 5-100 % extract after 3 days and 10,000 times growth induction after 4 days in 5-100% extracts. The biofilms of D. indonesiensis and D. vulgaris was examined using scanning electron microscopy and confocal laser scanning microscopy. The results obtained revealed an enhanced growth of the test organisms treated with extracts of B. alba when compared with untreated organisms. The results of this study suggest that aqueous extracts of B. alba can be used as a rapid detection tool for D. indonesiensis and D. vulgaris.*

**Key words:** *Basella alba*, extracts, induction, *D. indonesiensis* NCIMB 13468 and *D. vulgaris* NCIMB 8303.

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