

# FERMENTATION OF TEA POWDER WASTE BY MONASCUS TO PRODUCE DEODORANT

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## ABSTRACT

THE PURPOSE OF THIS RESEARCH IS TO FIND THE BEST METHOD TO FERMENT INDUSTRIAL WASTE AND AGRICULTURAL WASTE TO PRODUCE DEODORANTS. NINE MICROORGANISM WERE STUDIED IN THIS RESEARCH. FIVE OF THEM ARE MONASCUS OBTAINED FROM CULTURE COLLECTION AND RESEARCH CENTER (CCRC). THEY ARE MONASCUS PURPUREUS CCRC 31527, MONASCUS PURPUREUS CCRC 31499, MONASCUS PURPUREUS CCRC 31530, MONASCUS RUBBER CCRC 31535 AND MONASCUS PURPUREUS CCRC 32966. THE OTHER FOUR MICROORGANISM, LACTIC ACID BACTERIA, STREPTOCOCCUS ACTUOSUS A151, PSEUDOMONAS FLUORESCENS K188 AND BACILLUS SUBTILIS V656, WERE THE MICROORGANISM INCUBATED IN THE LAB. AFTER TESTING THE NINE MICROORGANISM, MONASCUS RUBBER CCRC 31535 IS PROVED TO BE THE MICROBE THAT MEETS THE NEED OF THE PROJECT BEST. THE BEST CONDITION FOR MONASCUS RUBBER CCRC 31535 TO GROW WAS THEREFORE INVESTIGATED. THE RESULT SHOWED THAT MONASCUS RUBBER CCRC 31535 GROWS BEST WHEN THE WATER CONTENT OF THE MEDIUM IS 60% (W/V). THE BEST MEDIUM FOR MONASCUS RUBBER CCRC 31535 TO GROW IS TPW. THE SIZE OF THE MEDIUM IS PROVED TO HAVE NO EFFECT ON DEODORIZATION. THE DAYS FOR INCUBATING THE MONASCUS RUBBER CCRC 31535 FOR THE BEST RESULT ARE NINE DAYS. THE MEDIUM DOES NOT NEED TO BE HEAT TREATMENT AND NAOH TREATMENT. THE DEODORANT IS DRIED WITH 100 ° C IN THE OVEN FOR THE BEST RESULT. THE CHARACTERS OF THE DEODORANTS PRODUCED IN THIS RESEARCH ARE AS FOLLOWS: THE DEODORANT PRODUCED USING MONASCUS RUBBER CCRC 31535 WORKS BEST IN ROOM TEMPERATURE; WHEN THE TEMPERATURE DROPS BELOW 4 ° C, THE EFFECT OF DEODORIZATION OF THE DEODORANT DECREASES. THE DEODORANT PRODUCED USING MONASCUS RUBBER CCRC 31535 IS SATURATED IN 48 HOURS. THE DEOROIZANT PRODUCED USING LACTIC ACID BACTERIA IS SATURATED IN 12 HOURS. COMPARING WITH THE DEORIZANTS SOLD IN THE MARKET, THE DEODORANTS PRODUCED IN THIS RESEARCH ARE BETTER IN DEODORIZATION.

Keywords : DEODORANT, WASTE, MONASCUS, LACTIC ACID BACTERIA, MICROORGANISM.

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