



## Effect of Sodium Sulphite-Microwave Pretreatment on Paddy Straw Digestibility

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**Abstract:** To remove lignin and silica complex of paddy straw, which are the main hindering factors in paddy straw digestibility, sodium sulphite (different concentrations i.e. 2, 4, 6, 8, and 10%) pretreatments in combination with microwave (30 and 60 min) were applied. Microwave irradiations were found to enhance the paddy straw biodegradability in combination with sodium sulphite. Lignin and silica content of pretreated paddy straw decreased by 30.0 and 16.9 per cent, respectively as compared to untreated paddy straw when paddy straw was soaked in 10 per cent sodium sulphite for 48 h. Whereas, 48.3 and 15.4 per cent reduction in lignin and silica content was found in case of only 4 per cent sodium sulphite pretreatment in combination with microwave (60 minutes).

**Key Words:** Paddy straw, Ligno-cellulose, Microwave, Sodium-sulphite

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