

**ANALYSIS OF SOUND ABSORPTION VALUE TEST ON DASHBOARD  
ABSORBING MATERIAL MADE FROM COCONUT  
FIBER WITH CREAM LATEX MATRIX**

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**ABSTRACT**

*The aim of this research is to evaluate the sound absorption capability of a sound-absorbing material made from coconut fiber with a latex adhesive matrix through two types of tests, namely Transmission Loss and sound intensity level. In the Transmission Loss test, three sound-absorbing variations were tested: Variation A (400 grams of coconut fiber and 600 grams of latex), Variation B (200 grams of coconut fiber and 800 grams of latex), and Variation C (standard car sound absorber). The results showed that Variation A had the highest Transmission Loss with an average of 35.2 dB, followed by Variation B (8.46 dB) and Variation C (6.69 dB). The highest Sound Transmission Class (STC) value was also achieved by Variation A with a value of 26, compared to Variation B (1) and Variation C (0). The sound intensity level test was conducted using engine speeds (RPM) of 1000, 2000, 3000, 4000, and 5000 RPM on a vehicle with four variations: Variation A, B, C, and D (no sound absorber). The test results showed that Variation A was able to reduce the sound intensity level better at various engine speeds compared to the other variations. Variations B and C showed better performance than Variation D but were still below Variation A. The conclusion from this study indicates that sound-absorbing materials based on coconut fiber and latex matrix, especially Variation A, are the most effective choices in reducing sound transmission and intensity. The implementation of this sound-absorbing material can significantly contribute to reducing engine noise in vehicles.*

**Keywords:** *Sound absorber, transmission loss, sound intensity level, engine noise.*