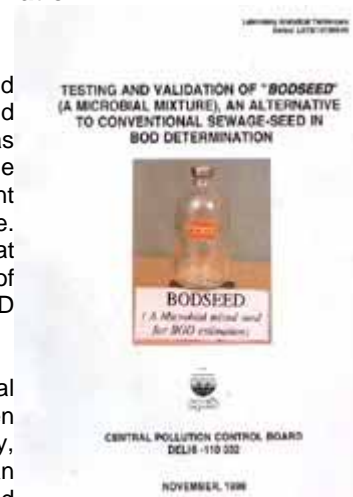


Testing and Validation of BODSEED (A Microbial Mixture) and Alternative to Conventional Sewage Seed in BOD Determination

Foreword

Biochemical Oxygen Demand (BOD) is the most important and commonly used parameter in monitoring the strength of water and wastewater. While conducting BOD test, domestic sewage is added as seeding material, a source of microbial population, to decompose the organic waste. The sewage used as microbial seed in different laboratories collected at different timings is not of uniform nature. Moreover, the microbial community varies from season to season at any place. There are variations in microbial diversity in terms of species and number, which lead to variations in the results of BOD estimation.

To overcome these problems associated with use of conventional sewage-seed, a standard mixture of microbial cultures has been developed in collaboration with Centre for Biochemical Technology, CSIR, Delhi. This culture is named as BODSEED, which is used as an alternative to conventional sewage, to get reproducible and comparable data in BOD determination. Moreover, the BODSEED is economical, convenient and safe to handle as compared to conventional sewage seed.



The developed "BODSEED" has been tested and validated alongwith conventional sewage seed for BOD determinations using various synthetic and industrial samples involving eight laboratories.including Central Pollution Control Board. The findings of the study reveal that use of BODSEED yields better performance when compared to conventional sewage-seed and hence it can be replaced by BODSEED a uniform microbial mixture for BOD determinations.

We trust that the findings of the study will be useful in developing a modified standard method in BOD determination to get reproducible data and also to make BOD test an economical, convenient and safe.

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