

LIFirr with an Indicator of Microbial Activity in Paraffinic Oil

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Abstract : Paraffinic oils were submitted to microbial action. The microorganisms consisted of bacteria of the genera *Pseudomonas* sp and *Bacillus* lincheniforms. The alterations in interfacial tension were determined using a tensometer and applying the hanging drop technique at room temperature ($299\text{ K} \pm 275\text{ K}$). The alteration in the constitution of the paraffins was evaluated by means of gas chromatography. The microbial activity was observed to reduce interfacial tension by 54 to 78%, as well as consuming the paraffins C19 to C29 and producing paraffins C36 to C44. The LIFirr technique made it possible to determine the microbial action quickly.

Keywords : paraffins, biosurfactants, LIFirr, microbial activity

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