

DETERMINATION OF THE SURFACE TENSION  
OF 5CB LIQUID CRYSTAL BY THE PENDANT  
DROP METHOD

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S u m m a r y

The surface tension  $\sigma$  of 5CB has been measured in a wide temperature interval at the free surface and 5CB/glycerine interface, using a pendant drop method. Both curves indicate an anomalous behaviour, which implies the positive slopes of  $\sigma(T)$  in the nematic and isotropic phases. Our experiments confirm the previous results [3, 5] that the isotropic boundary conditions influence not only the values of  $\sigma$ , but also the shape of  $\sigma(T)$ . The observed features are in a qualitative agreement with the theoretical predictions of Croxton and Chandrasekhar and may be explained by the existence of more ordered nematic states at the interface as compared with the bulk phase. The mechanisms, which are responsible for the interfacial molecular alignment of 5CB, are discussed.