

LETTER TO THE EDITOR

The Melting Point of 4:4'-Diaminodiphenyl sulphone (Dapsone)

SIR,—4:4'-Diaminodiphenyl sulphone is required by the British Pharmaceutical Codex to have a melting point as defined in the British Pharmacopœia 1953, page 703, lying between 176° C. and 179° C. (B.P.C. 1949, Supplement 1952, page 19), and material conforming to these limits has been manufactured over a number of years without difficulty. Recently, however, samples have been encountered melting sharply in the region of 180·5° C.; these high melting temperatures were not associated with any known modifications in the method of preparation and it is hardly possible that they represent a purer product. Thus, on frequent occasions, samples having melting points in the region of 178° C. exhibited, after grinding, melting points in the region of 180·5° C., and on a few occasions the same effect was obtained by leaving samples melting at about 178·5° C. in an oven at 50° C. for several days. On the other hand, recrystallisation of the high melting material from water and isolating at 5° C. caused the melting point to fall from 180·5° C. to 178·5° C. and it remained at this level on repeated recrystallisation; recrystallisation from methanol had the same effect.

We conclude from these observations that 4:4'-diaminodiphenyl sulphone can be obtained in at least two forms, melting respectively at about 178·5° C. and 180·5° C.; each of these melting points represents material of a high degree of purity, but the material having the higher melting point does not conform strictly to the requirements of the B.P.C. Monograph.

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(ABSTRACTS *continued from p. 567*).

but their oxygen uptake was increased. Virulent bacteria grown in the presence of high amounts of tween 80 decolorised methylene blue in a test in which organisms from the same virulent strain but cultured without tween 80 did not reduce the dye (a positive methylene blue test is typical of non-virulent tubercle bacilli). Essentially the same changes occurred when virulent tubercle bacilli were grown in the presence of 0·5 $\mu\text{g./ml.}$ of *p*-formacetanilide thiosemicarbazone; this amount was not sufficient to prevent the growth of bacteria or reduce the number of viable cells in a culture, but it reduced the virulence of bacteria considerably and rendered them capable of decolorising methylene blue. Cord factor, a lipid constituent of virulent bacteria which is toxic for mice, was shown to be present in filtrates from cultures of virulent bacteria when the media contained 2 per cent. tween 80, but could not be recovered from culture filtrates containing 0·05 per cent. On the other hand, no toxic material could be extracted from bacteria grown in the presence of 0·5 $\mu\text{g./ml.}$ of *p*-formacetanilide thiosemicarbazone.

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