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The Determination of the Reactivity of the
Histidine Residues of Sperm Whale Met-
Myoglobin with Bromoacetate

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SUMMARY

The determination of the reactivity of the histidine residues of sperm whale metmyoglobin by reaction with bromoacetate is discussed, with special emphasis on a series of tryptic peptides for which this method was first used with myoglobin. Out of a total of nine peptides studied in detail as to amino acid composition, five were found to contain histidine residues. Of these five, three were found to be reactive towards bromoacetate while the others were non-reactive due primarily to internal bonding within the molecule. A second and third series of tryptic peptides, both of which had been reacted for a longer period of time with bromoacetate than had the first series, and one of which was reacted with radioactive bromoacetate are also mentioned. The significance of the findings are discussed in relation to the myoglobin molecule as a whole.

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