

COMMERCIAL $\{C-^3H\}$ -DL-PHENYLALANINE; DISTRIBUTION OF LABEL.

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DL-Phenylalanine specifically labelled with tritium in the aromatic ring is not readily available with high specific activity. The Radiochemical Centre, Amersham do, however, supply generally labelled material which was suitable for our purpose as we could show in the following way that the activity was confined to the ortho and para positions of the aromatic ring.

A diluted sample of $[C-^3H]$ -DL-phenylalanine was degraded to phenylacetic acid¹ with little loss of activity. It is known that the phenylacetic acid derived in this way is devoid of label on the benzylic carbon atom and thus most of the activity (96%) present in the phenylalanine is confined to the aromatic ring. Activity in the para position (45%) was determined by conversion of the phenylacetic acid to its p-nitro derivative whilst that in the ortho positions (26% each) followed from the activity of o-iodoacetic acid. This was obtained by thallation of phenylacetic acid followed by iodination of the thallium derivative.² The meta positions were deduced to be devoid of radioactivity.

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REFERENCES

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