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PREPARATION OF ^{35}S -LABELLED L-METHIONINE AND L-CYSTINE BY BIOSYNTHESIS

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PREPARATION OF ^{35}S -LABELLED L-METHIONINE AND L-CYSTINE
BY BIOSYNTHESIS

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The modified method for biosynthesis of L-methionine- ^{35}S and L-cystine- ^{35}S from baker's yeast (Saccharomyces cerevisiae) is described. The yeast was cultivated in a sulphur-depleted medium containing carrier-free $\text{Na}_2^{35}\text{SO}_4$, under air bubbling during 24 hours. Yeast proteins were hydrolyzed enzymatically into free amino acids, and L-methionine- ^{35}S and L-cystine- ^{35}S were isolated by ion-exchange chromatography on a column. Radioactive yields for L-methionine- ^{35}S and L-cystine- ^{35}S were 30% and 10%, respectively. The obtained products have high specific activity, 1-10 Ci/mmol, and radiochemical purity better than 95%.