

TYPE CULTURES FOR THE MICRO-BIOLOGICAL ASSAY OF AMINO-ACIDS

IN pursuance of a comprehensive programme^{1,2} for determining the suitability of the Type Culture collections for the microbiological assay of vitamins, amino-acids and other active principles, we have found the amino-acid requirements of two of the lactic cultures L.C. 3, N.C.T.C. 2078, and *L. acidophilus*, N.C.T.C. 2087 taken from our repository. Several standard microbiological procedures for the assay of various amino-acids are now available.^{3,4,5,6}

The experimental procedure and technique for the preparation of amino-acid mixtures, inocula and the handling of the cultures, are similar to those described by Stokes *et al.*⁵ The results are given in Table I. For the purpose of comparison the amino-acid requirements *L. casei* are also given.

TABLE I
Amino-acid requirements of lactic cultures
L.C. 3 and *L. acidophilus*

	Leucine	Isoleucine	Valine	Cystine	Methionine	Tryptophane	Tyrosine	Phenylalanine
<i>L. casei</i> N.C.T.C.	+	-	+	+	-	+	+	+
L. C 3 N.C.T.C. 2078	+	-	+	+	-	+	+	+
<i>L. acidophilus</i> NCTC 2087	+	-	+	+	-	+	+	+

	Aspartic acid	Lysine	Serine	Glutamic acid	Histidine	Arginine	Proline	Hydroxyproline	Alanine
<i>L. casei</i>	+	-	+	+	-	+	-	-	-
L.C. 3 N.C.T.C. 2078	+	+	+	+	+	+	-	-	+
<i>L. acidophilus</i> NCTC 2087	+	+	+	+	+	+	-	-	-

	Threonine	Norleucine	Glycine
<i>L. casei</i>	-	-	-
L. C. 3 N.C.T.C. 2078	+	-	-
<i>L. acidophilus</i> NCTC 2087	+	-	-

It will be seen from the table that the two cultures under study require threonine, histidine and lysine in addition to the amino-acids

required by *L. casei*; thus covering a wider range of amino-acids. Further work along this line is in progress.

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