

## Availability

### Bacto™ Casamino Acids

	AOAC	BAM	COMPF	SMWW	USDA	USP
Cat. No. 223050						

### Bacto™ Casamino Acids, Technical

Cat. No. 223120	Dehydrated – 500 g
223110	Dehydrated – 10 kg

### Difco™ Casamino Acids, Vitamin Assay

Cat. No. 228820	Dehydrated – 100 g
228830	Dehydrated – 500 g

### BBL™ Acidicase™ Peptone

	AOAC	BAM	COMPF	SMWW	USDA	USP
Cat. No. 211843						

## Casein Agar

(See *Nocardia Differentiation Media*)

## Casein Digest

### Intended Use

Casein Digest is used in preparing microbiological culture media.

### Summary and Explanation

Casein Digest, an enzymatic digest of casein similar to N-Z-Amine A, was developed for use in molecular genetics media. This product is digested under conditions different from other enzymatic digests of casein, including Tryptone and Casitone.

### User Quality Control

#### Identity Specifications

##### Difco™ Casein Digest

Dehydrated Appearance:	Light beige, free-flowing, homogeneous.
Solution:	1%, 2%, and 10% solutions, soluble in purified water. Solutions are: 1%-Light to medium amber, clear; 2%-Medium amber, clear; 10%-Dark amber, clear.

Reaction of 1% Solution at 25°C:	pH 7.0 ± 0.2
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#### Cultural Response

##### Difco™ Casein Digest

Prepare NZM Broth per formula. Inoculate and incubate at 35 ± 2°C for 18-72 hours.

ORGANISM	ATCC™	INOCULUM CFU	RECOVERY
<i>Bacillus subtilis</i>	6633	10 <sup>2</sup> -10 <sup>3</sup>	Good
<i>Escherichia coli</i> (HB101)	33694	10 <sup>2</sup> -10 <sup>3</sup>	Good
<i>Escherichia coli</i> (JM107)	47014	10 <sup>2</sup> -10 <sup>3</sup>	Good
<i>Escherichia coli</i> (DH5)	53868	10 <sup>2</sup> -10 <sup>3</sup>	Good
<i>Saccharomyces cerevisiae</i> *	9763	10 <sup>2</sup> -10 <sup>3</sup>	Good
<i>Streptomyces avermitilis</i>	31267	10 <sup>2</sup> -10 <sup>3</sup>	Fair to good

\*Tested with addition of 0.5% dextrose.

Casein Digest is contained in the formulas of NZ media (NZCYM Broth, NZYM Broth and NZM Broth), which are used for cultivating recombinant strains of *Escherichia coli*. *E. coli* grows rapidly in these rich media because they provide amino acids, nucleotide precursors, vitamins and other metabolites that the cells would otherwise have to synthesize.<sup>1</sup> Consult appropriate references for recommended test procedures using NZ media.<sup>1,2</sup>

### Principles of the Procedure

Casein Digest is a nitrogen and amino acid source for microbiological culture media. Casein is raw milk protein, a rich source of amino acid nitrogen.

### Procedure

See appropriate references for specific procedures using Casein Digest.

### Expected Results

Refer to appropriate references and procedures for results.

### References

1. Ausubel, Brent, Kingston, Moore, Seidman, Smith and Struhl (ed.). 1994. Current protocols in molecular biology, vol.1. Current Protocols, New York, N.Y.
2. Sambrook, Fritsch and Maniatis. 1989. Molecular cloning: a laboratory manual, 2nd ed. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.

### Availability

#### Difco™ Casein Digest

Cat. No. 211610	Dehydrated – 500 g
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