



3050 Spruce Street  
Saint Louis, Missouri 63103 USA  
Telephone 800-325-5832 • (314) 771-5765  
Fax (314) 286-7828  
email: techserv@sial.com  
sigma-aldrich.com

## Product Information

### Azocasein

Product Number **A 2765**

Storage Temperature 2-8 °C

#### Product Description

CAS Number: 102110-74-7

Molecular Weight: 23.6 kDa

$\lambda_{\text{max}}$ : 440 nm

Extinction Coefficient:  $E^{1\%} = 32-38$   
(440 nm in 0.1 M NaOH)

This product consists of casein (Product No. C 7078) conjugated to an azo-dye. This serves as a general substrate for proteolytic enzymes. Degradation of the casein liberates free dye into the supernatant that can be quantitatively analyzed. Typical assay procedures using such a substrate has been published.<sup>1</sup>

#### Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

#### Preparation Instructions

This product is soluble in 0.1 M NaOH (10 mg/ml), yielding a clear, dark orange to red solution.

#### Procedure

A moderate drawback of using azocasein as a protease substrate is that it tends to generate high background. A way to reduce the high background of this product is:

1. Dissolve the product in water (5 mg/ml)
2. Dialyze the solution against distilled water and filter through a 0.22  $\mu\text{m}$  filter.
3. Lyophilize the resulting filtrate.
4. Dissolve the powder again in water (5 mg/ml).
5. Adjust the pH to 3-4. This will precipitate the protein.
6. Pellet the precipitate in a microfuge at maximum speed.
7. Discard the supernatant that contains excess dye.
8. Dissolve the pelleted protein in 0.1 M NaOH (10 mg/ml).

#### References

1. J. Biol. Chem., **171**, 501 (1947).

MWM/NSB 11/02

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.