

## Description

**CASAMINE OTB** (orthotolylbiguanide) is a very effective anti-oxidant for soaps, inhibiting rancidity and discolouration without having any adverse effect on odour or appearance of the finished product.

## Usage Levels

**CASAMINE OTB** is recommended for use at very low concentrations of 0.04 - 0.1%, so the additional overall cost of the soap is extremely low.

The exact dosage is difficult to define precisely due to the variations in methods of soap manufacture. However, general recommendations for both soap and potash soaps are as follows:-

% of <b>CASAMINE OTB</b> on weight of soap	Soap Type
0.04 - 0.05	Medium and high titre and generally high stability soaps in cake, powder, chip or flake form.
0.05	Palm and coconut soaps which although of low titre, are inherently highly stable.
0.1	Low titre and lower stability soaps.

## Incorporation into the soap

Two general methods are employed:-

### 1. Addition during milling

This is especially suited to bar cakes. Addition may be made of **CASAMINE OTB** as supplied, in an aqueous slurry, or as an alcoholic solution (including any alcoholic solution that may be used for perfume addition). Addition can be made during amalgamation, milling or podding.

### 2. Addition at crutchers

This is especially suited to flakes, chips, powders and non-milled soap and, again, addition may be made in alcoholic solution, water slurry, or in the dry powder state as supplied.

**Note: CASAMINE OTB**, being alkaline, reacts with fatty acids and should not, therefore be incorporated until saponification is complete.

**CASAMINE OTB**  
**SOAP ANTIOXIDANT**

## Test Methods

1. Performance in prevention of oxidation and rancidity may be estimated as follows:-

5mg of **CASAMINE OTB** are added to 5mg of soap and uniformly mixed. The mixture is placed in a 250ml glass-stoppered conical flask. A 7cm filter paper is cut into small pieces, saturated with 1ml of distilled water and added to the flask, which is then shaken to mix soap and paper. Place in an oven at 50°C. Daily checks of the odour on removal of the glass stopper are made and compared to a blank which does not contain **CASAMINE OTB**.

2. Performance of **CASAMINE OTB** in prevention of discolouration by sunlight may be estimated as follows:-

Into a mixture of 20mg **CASAMINE OTB** and 20g of soap, blend 5g of water and press the resultant mixture into a hard cake in a suitable crystallising dish. Prepare a blank in a similar way and observe, at frequent intervals, the effect of exposure to sunlight.

3. Qualitative Detection. **CASAMINE OTB** can be detected in soap at levels of 0.05 - 0.1% as follows:-

In a beaker containing 50g of the soap to be tested, add 150ml conc. hydrochloric acid. Heat the mixture to boiling until all the soap has decomposed. Transfer the hot mixture to a separate funnel and draw off the hydrochloric acid layer. After cooling to room temperature, the acid layer is filtered to remove the small amount of fatty acid which separates. To 30ml of this clear filtrate add 3 drops of 10% solution of phospho-molybdic acid. A white precipitate forms immediately if **CASAMINE OTB** is present.

## Handling Precautions

**CASAMINE OTB** is an eye irritant. Anyone working with **CASAMINE OTB** should be protected with dust masks and goggles. For further details see relevant SDS.

## Packaging Information

**CASAMINE OTB** is supplied in 25 kg nett weight, polyethylene lined, fibre board boxes.

## Typical Physical and Chemical Properties

Chemical Name	Orthotolylbiguanide	
<b>Structural Formula</b>		
Melting Point	139°C	
pH of 1% solution	11.0	
Solubility (in g/100g solvent @25°C)	Ethyl Alcohol	27
	Water	8
	Ethyl Glycol	1
	Ethyl Glycol mono-methyl ether	80
Appearance	White to off-white powder.	
Moisture %	0.4 max on date of dispatch*.	
Ethyl Alcohol Insolubles	0.5% max	
Melting Point	139 - 143°C min	
Assay	95% min on date of dispatch	
Retention on 32 mesh BSM sieve	Nil	

\* On storage, **CASAMINE OTB** will gradually absorb moisture until the equilibrium value of 4.5% corresponding to the hemihydrate is attained. When packed after production, it does not contain more than 0.4% moisture.