ANNEX

E 459 BETA-CYCLODEXTRIN

Synonyms	
Definition	Beta-cyclodextrin is a non-reducing cyclic saccharide consisting of seven α-1,4-linked D-glucopyranosyl units. The product is manufactured by the action of the enzyme cycloglycosyltransferase (CGTase) obtained from *Bacillus circulans, Paenibacillus macerans* or recombinant *Bacillus licheniformis* strain SJ1608 on partially hydrolysed starch
Einecs	231-493-2
Chemical name	Cycloheptaamylose
Chemical formula	$(C_6H_{10}O_5)_7$
Molecular weight	1 135
Assay	Content not less than 98,0 % of $(C_6H_{10}O_5)_7$ on an anhydrous basis
Description	Virtually odourless white or almost white crystalline solid
Appearance of the aqueous solution	Clear and colourless
Identification	
Solubility	Sparingly soluble in water; freely soluble in hot water; slightly soluble in ethanol
Specific rotation	$[\alpha]_D^{25}$ + 160° to + 164° (1 % solution)
pH value:	5,0-8,0 (1 % solution)
Purity	
Water content	Not more than 14 % (Karl Fischer method)
Other cyclodextrins	Not more than 2 % on an anhydrous basis
Solvent residues	Not more than 1 mg/kg of each of toluene and trichloroethylene
Sulphated ash	Not more than 0,1 %
Arsenic	Not more than 1 mg/kg
Lead	Not more than 1 mg/kg

Changes to legislation:
There are currently no known outstanding effects for the Commission Regulation (EU) No 231/2012, E 459 BETA-CYCLODEXTRIN.