Enzyme

Patent S.No	Patent No.	Priority date	Surfactant	Overall Claimed Composition patent	Benefit/Advantage
Enzyme					
Enzyme and Builder					
4	GB2307695A	11/30/1995	Anionic and non-ionic surfactants	(a) organic surfactant comprising at least one nonionic, anionic, cationic, amphoteric or zwitterionic surfactant; (b) at least one inorganic or organic builder; (c) a soil releasing water-soluble or water-dispersible sulphonated polyester comprising monomer units of: (i) an unsulphonated aromatic diacidic monomer (A); (ii) a sulphonated aromatic diacidic monomer (SA); optionally (iii) a hydroxylated aromatic or aliphatic diacidic monomer (HA), (A) and/or (SA); (iv) a polyol, (d) an enzyme system comprising at least 2 different enzymes selected from proteases, lipases, amylases and cellulases	Improved soil-release properties
5	GB2274849A	2/5/1993	Wide range is mentioned in general in description	Non-soap detergent active, a detergency builder, enzyme Papain and at least one activating agent	Not specified
Enzyme and Stabilizer					
6	GB2255352A	5/1/1991	Amphoteric surfactant, nonionic surfactant and other surfactns (Wide range is mentioned in general in description)	Amphoteric surfactant, nonionic surfactant, enzyme, and enzyme stabilizer	Longer stabilty
7	GB2248452A	10/5/1990	Cationic and nonionic surfactants	Cationic and nonionic surfactants, proteolytic enzyme derived from a microorganism, organic calcium sequestrant, glycerol borate stabiliser, water-miscible organic solvent	Very good storage stability and prolonged shelf life at relatively high temperatures
8	GB2271120A	09/30/1992 | 09/27/1993	Soap and synthetic surfactant mixture	Detergent active, water and a mutant subtilisin enzyme, boron compound (borax), polyol, acid and/or its alkali metal salt	The composition includes mutant enzymes which have good stability, even under storage at relatively high temp. and humidity and composition has good cleaning capacity.
9	GB2246140A	06/07/1990 | 06/04/1991	Wide range is mentioned in general in description	(a) a surfactant selected from the group consisting of anionic, nonionic, cationic, ampholytic or zwitterionic surfactants and mixtures thereof; (b) enzyme; and (c) protein containing quaternary nitrogen substituent.	Quartenary ammonium containing protein improves enzyme stability
Enzyme and Other Ingredients					
10	GB2372261A	12/21/2000 | 12/11/2001	Wide range is mentioned in general in description	a) oxidoreductase, b) surfactant, c) modifier, and d) densified carbon dioxide	Bleaching textile articles with grass stains and/or oily tomato stains
11	GB2267911A	4/30/1992	Non-ionic surfactant and other surfactants (Wide range is mentioned in general in description)	Water-soluble needle-like material (salts, surfactants), binder, non-aqueous liquid (non-ionic surfactant), encapsulated ingredients: (an enzyme, a fluorescer, a bleach catalyst or a bleach precursor)	Sensitive materials such as enzymes, bleaches, bleach precursors or optical brighteners are protected from unwanted interaction with other components by encapsulating them.
12	GB2406340A	08/07/2002 | 07/21/2003 | 07/21/2003	Anionic surfactant (linear alkylbenzene sulphonate) is preferred	Flexible porous housing containing detergent composition (interior of the housing is coated with a bleach ingredient, an enzyme, a perfume, a fluorescer or mixtures thereof, preferably an enzyme)	Housing helps to generate more foam, so less detergent composition is used and its cost performance is increased.