

United States Patent [19]
Langdon

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[54] **NON-IONIC SURFACE-ACTIVE AGENTS
COUPLED WITH CARBONATES OR
CARBOXYLIC ESTERS**

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[52] **U.S. Cl.** **260/463; 560/130;
560/146**

[58] **Field of Search** **560/1, 8, 149, 129,
560/130, 146; 260/463; 568/625**

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,676,398 7/1972 D'Alelio 560/129

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[57] **ABSTRACT**

Biodegradable non-ionic surface-active agents containing carbonate groups or residues of carboxylic esters can be prepared by reacting hydrophilic polyoxyalkylene glycols derived from the same or different alkylene oxide glycols with monofunctional alcohols. The compositions of the invention contain both hydrophilic and hydrophobic groups in the molecule making them suitable for use as surface-active agents. The residues of the monofunctional alcohols provide hydrophobic groups in the molecule of the surface-active agent.

9 Claims, No Drawings