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Masri et al.

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[54] **CHITOSAN MODIFIED WITH ANIONIC AGENT AND GLUTARALDEHYDE**

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[58] **Field of Search** 536/20

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,040,879	5/1936	Rigby	536/20
2,072,771	3/1937	Rigby	536/20
2,670,329	2/1954	Jones	536/20 X
2,689,244	9/1954	Jones	536/20
2,755,275	7/1956	Cushing et al.	536/20
2,783,148	2/1957	Gyorgy et al.	536/20 X
2,831,851	4/1958	Vogler	536/20
2,832,766	4/1958	Wolfrom	536/20
2,910,408	10/1959	Pope et al.	536/20 X
3,155,575	11/1964	Doczi et al.	536/20 X
3,761,585	9/1973	Mullan et al.	260/112 R X
3,796,634	3/1974	Haynes et al.	260/112 R X
3,823,129	7/1974	Kalb et al.	260/123.5
3,985,696	10/1976	Aignesberger et al.	260/67.6 R X
4,029,727	6/1977	Austin et al.	536/20 X
4,056,432	11/1977	Slagel et al.	260/17.4 GC
4,059,457	11/1977	Austin	536/20 X
4,063,016	12/1977	Austin	536/20
4,066,735	1/1978	Peniston et al.	536/20 X

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[57] **ABSTRACT**

Superoxy-anion-forming metals, such as chromium, manganese, and the like, are removed from materials containing the same by contacting the material with an anionically-modified, nitrogen-containing polymer, such as sulfite-modified, sulfate-modified, or chloride-modified chitosan.

1 Claim, No Drawings