

several immunogenic ailments [91]. Since then, several studies report that alginates with M blocks were found to be immunogenic, whereas other reports show no such activity. But still, several works on the use of alginate in medicinal field are still being explored [92]. Houghton *et al.*, [93] showed that alginates can be used as a weight loss agent since they give zero calories.

## 14.5 Application of Alginates

Alginates have found their application in several industries, which have been discussed in brief in the table below:

Properties	Applications	Reference
<b>In food industry</b>		
Thickeners and gelling agents	Ice creams, soups, sauces, dressings, ketchup, mayonnaise, margarine, milkshakes, fruit juices, liquors, desserts, jams, puddings, whipped cream, pie fillings, mashed potatoes, and restricted foods	[10]
Stabilizers	Ice cream, wheat dough	[94, 95]
Emulsifiers	Beverages	[96]
Texturizers	Desserts	[97]
Encapsulates	Probiotic	[98–101]
Food coatings	Fruits, vegetables, and meat	[102–104]
Binders	In pet foods	[105, 106]
<b>In pharmaceuticals</b>		
Delivery	Drugs and proteins	[107–109]
Cell culture		[110–112]
Tissue regeneration		[113]