

be toward the development of covalent and ionic interactions and cross-link. Also attention should be given for developing the functionalized and modified alginate material and coating. Still there should be improvement done in the chemical stability and mechanical strength of alginates and their products.

3.8 Advantages

The following are the advantages of alginates:

- Biocompatibility
- Biodegradability
- Naturally available
- Large application in different areas

3.9 Disadvantages

The following are the disadvantages of alginates:

- They have bad dimensional stability. They serve as a bad material or messy material to work with.
- They have low chemical stability. This is because most of the time, alginates are cross-linked with calcium ions. And the solution to that is to increase the content of G so that stability will also increase.
- Instead of using original forms, their composites give better results.

3.10 Conclusion

Studies in the field of polymers are necessary since they are innovative materials possessing a number of uses owing to their extraordinary properties. Since polymer creation today, scientific research has gathered lots of interest due to their benefits towards the environment [23–25]. Besides the general properties and functions of alginates, there are various approaches available in drug delivery, pharmaceutical, and biomedical fields by use of encapsulation and alginate microparticles. Initially this was used for wound dressing, but now it is widely used in the medical field.