

solution, which is then dialyzed. Once  $\text{Ba}^{2+}$  ions are fully exchanged for  $\text{Na}^+$  ions, the purified sodium alginate is precipitated from the solution by the addition of ethanol. Figure 1.10 shows alginate solutions before and after purification.

## 1.5 Summary

Many species of brown seaweed are commercially available from many parts of the world, which gives the alginate extract industry a wide variety of raw materials for the production of alginate with different chemical and physical properties. Some may yield an alginate that gives a strong gel, another a weaker gel; one may readily give a cream/white alginate, another may give that only with difficulty and is best used for technical applications where color does not matter. Alginate producers often prefer to buy a mixture of species of seaweed that allows them to blend their products to give them properties suitable for specific end uses.

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