starch can be made water-resistant by coating with biodegradable polyesters such as poly(beta-hydroxybutyrate-co-valerate) (PHBV), poly(lactic acid) (PLA), and poly(.di-elect cons.-caprolactone) (PCL). Adherence of the two dissimilar materials is achieved through the use of an intervening layer of a resinous material such as shellac or rosin which possesses a solubility parameter (hydrophobicity) intermediate to that of the starch and the polyesters. Coating is achieved by spraying an alcoholic solution of the shellac or rosin onto the starch-based article and subsequently coating with a solution of the polyester in an appropriate solvent. However, these products are not optimally designed for allowing a user to carry them easily while being in a physical activity. In addition, they are not designed to provide different liquid volumes that can be consumed according to instant needs.

[0010] All of the aforementioned prior art constructions are deficient with respect to their failure to provide a simple, efficient, and practical packaging arrangement for liquids that will provide the user with easy access to flexible compartmented packaging for liquids. Consequently, there is a need for a new and improved type of a biodegradable liquid receptacle.

SUMMARY ~~OF THE INVENTION~~

[0010a] In one aspect, there is provided a biodegradable sheet comprising a nanoclay and polyvinyl alcohol (PVOH).

In another aspect, there is provided a biodegradable sheet comprising an inner layer, wherein said inner layer comprises PVOH.

[0011] One embodiment of the ~~invention~~ disclosure is directed to a biodegradable sheet comprising a gas barrier material. According to some embodiments, the gas barrier material is a nanoclay, according to other embodiments, the gas barrier material is polyvinyl alcohol (PVOH), and according to further embodiments, the gas barrier material is a combination of a nanoclay and PVOH.

[0011a] In one aspect, there is provided a receptacle unit prepared from the biodegradable sheet as defined herein, comprising a compartment for storing liquids and a means by which the liquids are removed therefrom.

[0012] Another embodiment of the ~~invention~~disclosure is directed to a receptacle unit prepared from a biodegradable sheet that comprises a gas barrier material, wherein the receptacle unit comprises a compartment for storing liquids and a means by which the liquids are removed therefrom. According to some embodiments, the receptacle unit comprises a hanger.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] The above and other characteristics and advantages of the invention will be better understood through the following illustrative and non-limitative detailed description of preferred embodiments thereof, with reference to the appended drawings, wherein:

[0014] Fig. 1 illustrates the construction of an array of receptacle units of different volume, according to an embodiment of the invention;