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Werpy et al.

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(54) **METHODS OF PRODUCING COMPOUNDS FROM PLANT MATERIALS**

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(52) **U.S. Cl.** **536/128**; 536/124; 536/56; 536/102; 536/123.1

(58) **Field of Classification Search** 536/128, 536/124, 56, 102, 123.1
See application file for complete search history.

(57) **ABSTRACT**

The invention includes methods of processing plant material by adding water to form a mixture, heating the mixture, and separating a liquid component from a solid-comprising component. At least one of the liquid component and the solid-comprising component undergoes additional processing. Processing of the solid-comprising component produces oils, and processing of the liquid component produces one or more of glycerol, ethylene glycol, lactic acid and propylene glycol. The invention includes a process of forming glycerol, ethylene glycol, lactic acid and propylene glycol from plant matter by adding water, heating and filtering the plant matter. The filtrate containing starch, starch fragments, hemicellulose and fragments of hemicellulose is treated to form linear polyalcohols which are then cleaved to produce one or more of glycerol, ethylene glycol, lactic acid and propylene glycol. The invention also includes a method of producing free and/or complexed sterols and stanols from plant material.

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