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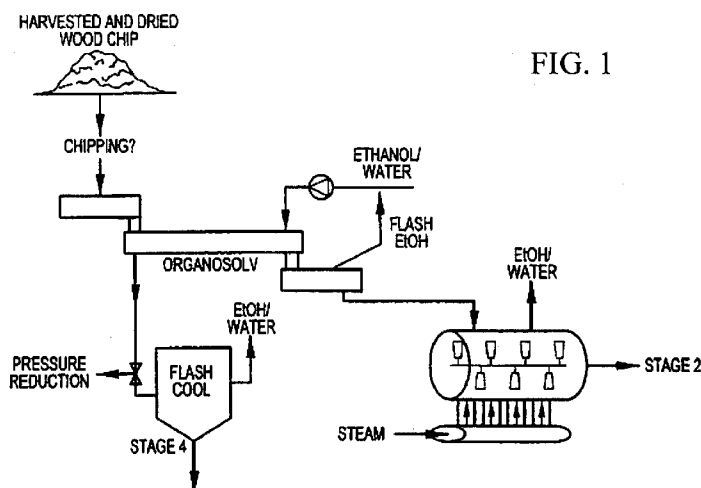
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**(54) Title:** LIGNIN AND OTHER PRODUCTS ISOLATED FROM PLANT MATERIAL, AND METHODS AND COMPOSITIONS THEREFOR



**(S7) Abstract:** Lignin polymers having distinctive properties, including a generally high molecular weight and generally homogeneous size distribution, as well as preservation of native reactive side groups, are isolated by solvent extraction of plant materials. Methods for isolation of lignin polymers, and for use of the isolated lignin polymers are disclosed. Compositions containing lignin isolated from plant materials, such as carbon fiber composites, resins, adhesive binders and coatings, polyurethane-based foams, rubbers and elastomers, plastics, films, paints, nutritional supplements, food and beverage additives are disclosed. Xylose and xylose derivatives, furfural, fermentable sugars, cellulose and hemi-cellulose products may be used directly or further processed. The lignin polymers and other plant-derived products disclosed herein may be produced in abundance at low cost, and may be used as substitutes for feedstocks originating from fossil fuel or petrochemical sources in the manufacture of various products.



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