

[A study of polymerization of aspen \(Populus\) wood lipophilic extractives by SEC and Py-GC/MS](#)

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Abstract:

Studies have been conducted on the formation of polymerised wood resin in model compounds and in lipophilic extracts of aspen. Our studies indicate that polymerization of wood resin components occurs during seasoning of aspen wood. The polymerization probably occurs via oxidation of fatty acids, especially the unsaturated ones, and glyceride components. It results in formation of products that are difficult to dissolve in normal solvents, depending on the extent of the polymerization. Also, the polymerization seems to result in the formation of sterols, compounds that are typically associated with "aspen wax". This implies that the seasoning practices used in aspen mills can result in the formation of polymerized wood resin that will be difficult to remove if present in pulp and paper products. On the other hand, these problems may be minor compared to using unseasoned wood.

* Excerpted from online journal website (Click the title)

Frontier Labs products used:

Multi-Shot Pyrolyzer, On-line micro-UV irradiator, UA⁺-5, UATDM-2.5N