

SINCLAIR REFINING COMPANY

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Oxo-process

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To Dr. Hansen

Re: Drying Oils

The I.G. patent 699430 describes the preparation of drying oils by means of the alkaline condensation of croton-aldehyde, either by itself or in presence of other aldehydes, which are still containing reactable methyl - or methylene groups. This patent shows that polymerized croton-aldehyde can be used as drying oil.

We might try to produce drying oils in a similar way by preparing alkaline polymerized products from acetaldehyde on the one hand, and from higher aldehydes, on the other hand, resp. from the olefin aldehydes which can be obtained therefrom by means of aldol condensation. On preparing oils from croton aldehyde, we find a ratio prevailing, whereby 2 molecules of the valuable acetaldehyde are consumed for each molecule of the latter. The aforementioned new method would consume the less acetaldehyde, the higher molecular structure of the other aldehyde constituent can be selected. The incentive in using this procedure lies in this reduction of the aldehyde quantities required.

In order to prevent the acetaldehyde from condensing with itself, a solution of acetaldehyde in benzene, e.g., or some similar substance, may be added drop by drop, together with the alkaline condensant, to the higher-aldehyde emulsion, which is kept at a constant temperature of 0°C.

K. Beth

MB:hlm