

Reactivity

The carbon atom of a carbonyl bears a partial positive charge, so the central carbon of a 1,2,3-tricarbonyl is less stable and more electrophilic than a simple ketone. In most compounds, a carbonyl is more stable than the dihydroxy (hydrate) form. However, ninhydrin is a stable hydrate of the central carbon because this form does not have the destabilizing effect of adjacent carbonyl partial-positive centers. Indane-1,2,3-trione reacts readily with nucleophiles.

We can also supply the starting materials used in the synthesis of Ninhydrin, viz., 1,3-Indanedione & 1,3-Indanedione-2-oxime.