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Title: A NEW STUDY OF IODINE COMPLEXES OF OXIDIZED GUM ARABIC: AN INTERACTION BETWEEN IODINE MONOCHLORIDE AND ALDEHYDE GROUPS

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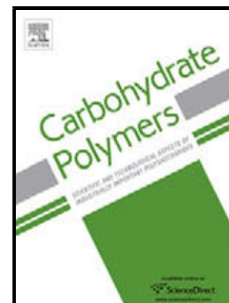
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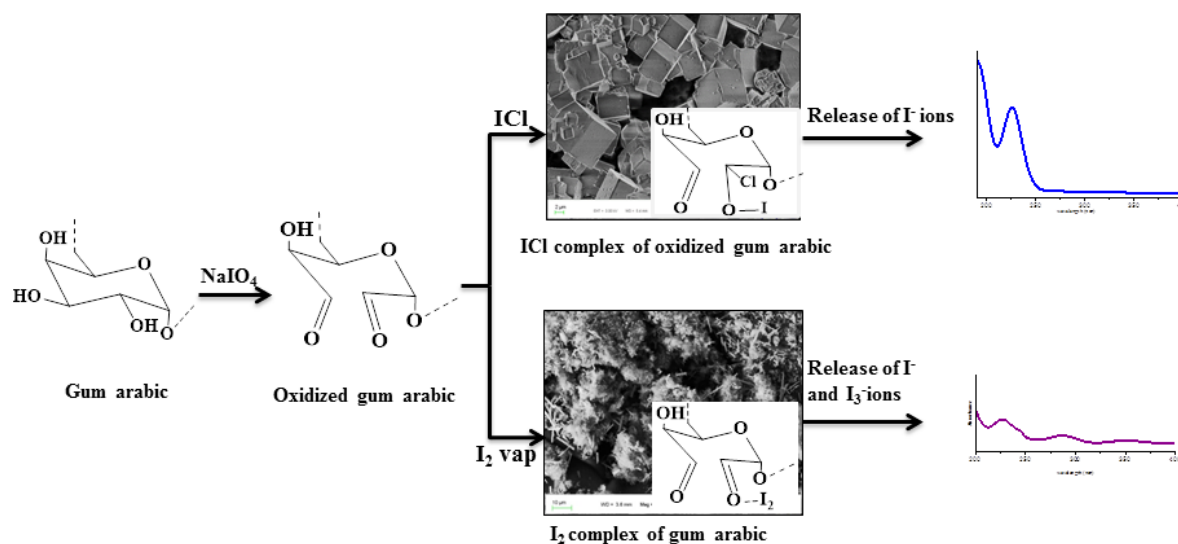
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Highlights

- Gum arabic was oxidized with periodate to generate dialdehyde groups in the chains
- The aldehyde groups in oxidized GA reacted with ICl and I₂ forming iodine complexes
- The experimental and spectral data showed addition of ICl molecules to –CHO groups
- ICl treated oxidized gum released iodide, the nutritional form of iodine, in H₂O

ABSTRACT



Gum arabic, a plant polysaccharide was oxidized with periodate to produce aldehyde groups by the cleavage of diols present in the sugar units. The oxidized gum was then iodinated with iodine monochloride (ICl) and the interaction between electrophilic iodine, I⁺ and reactive carbonyl groups of the modified gum was studied. Results of titrimetric estimation performed

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