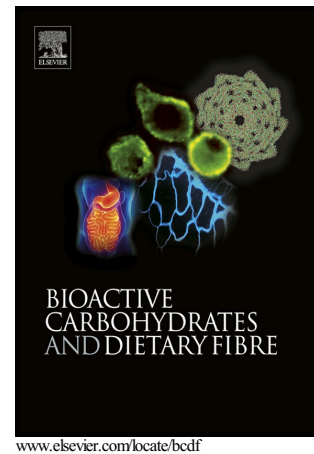


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Preliminary Study Pertinent to Colour Identification
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Towards *Acacia seyal* Protocol in Sudan: Preliminary Study Pertinent to Colour Identification and Physiochemical Properties

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Abstract:

Despite the significant contribution of *A. seyal* to the exports portfolio of Sudan, farmers have slightly poor knowledge regarding post-harvest cultural practices in terms of proper methods of gum drying, storage conditions and gum stacking which might significantly be resulted in colour deterioration and inferior quality. Nevertheless, the current preliminary investigation is intended to study colour identification and physiochemical properties of *A. seyal* gums from samples obtained via four exporting companies in Sudan and produced in three different geographical areas namely *Buram*, *Hejleij* and *Deain*.

Each sample was graded visually into three colours: light, pale and dark and based on further chemical analysis to the colour within the samples and across the production areas significant variation was obtained as the colour is ranging from 16.73 to 44.53 within the different graded samples and across the production areas. The results show that each sample is graded into three different colour scale referred to light, pale and dark.

The physiochemical properties within the tested samples and across the production areas showed no significant differences between all parameters including moisture content, ash content and pH. The specific optical rotation varies from +40 to +60 within the samples and across the different production areas. However, both minimum and maximum values of specific optical rotation were obtained from *Hejleij* production area and representing light and dark colour, respectively.

Keywords: *Acacia seyal* gums, colour intensity, specific optical rotation, geographical areas

1. Introduction

Acacia Gum is a natural agricultural resource from the Gum Belt region of Africa, i.e. countries geographically ranging from East to West -from Sudan, Somalia, Eritrea and Ethiopia to Chad, Central African Republic, Mali, Niger and further west up to Nigeria, Senegal and even Mauritania. However, *Acacia* Gum comes from Sudan, Chad and Nigeria is economically viable.

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