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Preserving Malay Heritage: The Intersection of Traditional Knowledge and Natural Pigments

Natural Pigments: Sources, Properties, and Health Benefits • Book Chapter • 2026

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Abstract

Globalization and rapid socioeconomic change have affected indigenous communities in Malaysia. A recent demand for plant-derived bioactive compounds has increased the attention of the researcher to discover phytochemicals content and manage the conservation of natural biodiversity simultaneously. Malay's indigenous knowledge and technology in natural colorants represent a rich heritage deeply rooted in the country's diverse cultural and ecological landscapes. The indigenous communities of Malay have long relied on natural resources for various purposes, including coloring fabrics, food, personal care, and crafts. Indigenous communities possess traditional knowledge passed down through generations regarding the identification, harvesting, and processing of natural colorants. This knowledge often involves an intimate understanding of local flora, including plants, roots, fruits, and even insects, that yield vibrant pigments suitable for dyeing. The use of natural colorants underscores a holistic approach to resource management and sustainability. Indigenous

practices typically emphasize responsible harvesting techniques to ensure the regeneration and preservation of natural dye sources. This sustainable ethos aligns with contemporary environmental conservation efforts and promotes biodiversity conservation. Meanwhile, natural colorants hold profound cultural significance for Malaysia's indigenous communities. The colors are derived from natural sources, which often carry symbolic meanings and are integral to traditional ceremonies, rituals, and artistic expressions. They serve as a tangible link to cultural heritage and identity, fostering a sense of pride and continuity among Indigenous peoples. Therefore, the main goal of this study is to identify and document the Malay indigenous knowledge and technology in natural colorant by focusing on plant resources in the Malay culture, where the ethnoscience behind each usage will be further elaborated. Finally, strategies on the preservation of the Malay indigenous knowledge specifically on natural colorants. In summary, there has been a growing interest in the scientific exploration and commercialization of natural colorants. Researchers and entrepreneurs are investigating the chemical composition, properties, and potential applications of indigenous dye sources for industries such as textiles, cosmetics, and food. This interdisciplinary approach combines traditional knowledge with modern scientific methods to unlock new possibilities for economic development and technological innovation.

Author keywords

ethnoscience; Malay indigenous knowledge; natural colorant; pigment; technology

Indexed keywords

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