Non-Invasive Tool That Assesses Bruise Injuries Across All Skin Types.

Tech ID: 34412 / UC Case 2024-9AN-0

BRIEF DESCRIPTION

An innovative non-invasive device that accurately determines the age of bruises for all skin types and tones, designed to assist in forensic investigations and medical diagnostics.

FULL DESCRIPTION

This medical device is an ingenious non-invasive tool designed to accurately assess and age bruises across diverse skin types and pigmentation levels. The tool identifies the presence of various biological components associated with the bruising and healing process by using multispectral spectroscopy. Leveraging a portable phone attachment coupled with a mobile application, it enables users to image bruises and determine the elapsed time since the injury occurred. This technology addresses the critical need for an objective method to evaluate bruise age, particularly benefiting forensic investigations and medical diagnostics.

SUGGESTED USES

- Forensic investigation, particularly in cases of domestic violence and abuse.
- Medical diagnostics for accurate bruise assessment and monitoring.
- Personal health monitoring, enabling individuals to track the healing process of injuries.
- Research in dermatology and the study of skin conditions and healing.
- Personalized learning platforms that offer tailored educational experiences.

ADVANTAGES

- Eliminates subjective visual assessment, offering an objective and scientific approach to bruise evaluation.
- Non-invasive analysis, providing a significant advantage over tissue sample analysis under a microscope.
- Enhanced accuracy compared to current methods that can only determine if a bruise is older than 18 hours.
- Effective on a wide range of skin types and tones, addressing disparities due to skin color.
- Portable and accessible, enabling on-the-spot assessments with a mobile phone attachment.

PATENT STATUS

Patent Pending

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OTHER INFORMATION

CATEGORIZED AS

- **Optics and Photonics**
  - All Optics and Photonics
- **Biotechnology**
  - Health
- **Computer**
  - Software
- **Imaging**
  - Medical
- **Medical**
  - Devices
  - Diagnostics
  - Disease: Dermatology
  - Research Tools
  - Screening

RELATED MATERIALS

» Frazeur, M., et al. Botvinickj, E. (2024). DermaVision. eScholarship

» **Sensors & Instrumentation**

» Medical

RELATED CASES

2024-9AN-0

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