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Fabrication of A Natural Polymer-Based Adhesive Interface for ECG Diagnostics

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A soft film was developed to prevent skin irritation and sensitivity from the adhesive used on standard ECG pads, especially during prolonged use or for users with sensitive skin. The adhesive film consists of gelatin, polyvinyl alcohol, glycerol, and phytic acid which together provide a non-irritating, gentle adhesive in the form of a soft and water- permeable film. The convenient design allows it to be used underneath or around regular ElectroCardioGram pads for easy removal, while maintaining the integrity of the ElectroCardioGram tracing. Preliminary results from the testing of the film demonstrated it to be soft, pliable, and skin conformable. The film could be a simple and skin friendly replacement for the regularly used adhesive materials in single use medical devices.

Keywords: Biomedical application, Biocompatible, Biodegradable, ElectroCardioGram adhesive, Skin-friendly

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