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PSD Analysis and Extraction of Values from Gastric Signal using Windowing Method

November 2023

DOI: [10.1109/ICSCNA58489.2023.10370698](https://doi.org/10.1109/ICSCNA58489.2023.10370698) Raja Gowtham ·  R. Chandrasekaran ·  J. Atchaya ·  M. D. AshfaqueCitations

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Abstract

In this study, the effects of unhealthy foods in the gastric motility have been discussed in detail. In the modern era the consumption of unhealthy food is increased tremendously among the young group people. The unhealthy food mentioned in this study are foods which contain high CHO concentration, meal volume, meal temperature, fat content and protein content foods. These types of foods affect the gastric cycle per minute. The changes in the gastric cycle leads to irritable bowel syndrome, gastroesophageal reflux, tachy-gastria and brady-gastria. In this study the electro gastro graphic signal is acquired from the subject before, after consumption of the pre-processed food and after consumption of the normal food to evaluate the difference between the gastro graphic signal at different states. The acquired signal is pre-processed using advanced filtering methods. The pre-processed EGG signal is analysed using PSD Hanning method to derive the power spectral values of the acquired EGG signal before and after consumption of the unhealthy foods.

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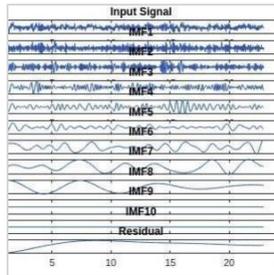
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In this study, the effects of pre-processed foods in the gastric motility are analysed and described in detail. The electro gastro graphic signal tends to vary based upon the types of the food we intake and the body mass index of the person. In the modern era the consumptions of the pre-processed foods ar...

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