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Biofilm formation on model surfaces of drinking water distribution system

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Biofilms are ubiquitous in aquatic environments, including drinking water distribution systems (DWDS). Aims of this work were to investigate biofilm formation of tap water microbiota on High Density Polyethylene (HDPE) surface and biofilm formation of two *Pseudomonas aeruginosa* strains on HDPE surface under different temperature conditions. Biofilms were formed first on HDPE surfaces in tap water at 25 °C. On different days of incubation the microbial concentration was determined. Similar investigations were carried out in R2A broth at different temperatures with two *Pseudomonas aeruginosa* strains. Initial cell concentration in tap water increased intensively in the first days of incubation. Concentration of irreversible attached cells on the HDPE surface increased in 8 days by 4 log cycle. Intensive growth was shown in case of *Pseudomonas aeruginosa* at 30°C. Incubation at 15°C delayed the development of the biofilm, but the maximum concentration of microbes achieved the same level as in case of incubation at 30°C. The lowest incubation temperature (8 °C) had an inhibitory effect on biofilm formation. No significant differences in biofilm formation ability could be detected when comparing the two *Pseudomonas aeruginosa* strains.

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Effects of Room Temperature Storage on Color and Weight of Golden Delicious Apples

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The popularity of Golden Delicious apples is due to their nutritional content. They are rich in antioxidants, vitamin C, and fiber. The shelf life and quality of apples can be significantly affected by various internal and external factors, with the temperature being one of the most critical factors. In this study, we looked at how storage at typical room temperature (20-25°C) affected the color and weight of Golden Delicious apples.

Apples were stored for six weeks, and the color parameters, including L* (lightness), a* (redness), and b* (yellowness), were measured using a Nix Pro wireless color sensor. The weight of the apples was measured using a digital scale.

The results revealed that storing Golden Delicious apples at room temperature had a detrimental impact on their color and weight. Appropriate post-harvest storage procedures, such as refrigeration or controlled environment storage, can help retain the quality and beauty of Golden Delicious apples. These data can be used to design storage methods and post-harvest handling practices for Golden Delicious apples to retain their quality and marketability.