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Functionalization of Flavonoids (quercetin) to Chitosan Matrix and Determination of Antioxidant Activity of Obtained Bio-composites

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In recent years, particular attention has been paid to antioxidant systems functionalized with natural organic polymers such as starch, dextran and especially chitosan. Chitosan is a polysaccharide with very good functional properties, which is obtained from natural sources and has a range of applications.

The most significant improvement of chitosan macro-molecules is focused on the functionalization of natural biologically active compounds from the flavonoid group such as quercetin and others in its polymeric structure. Within the given paper, new compounds of chitosan were synthesized with quercetin natural antioxidant. The antioxidant activity of modified chitosan was determined and changes in the chemical structure of chitosan and quercetin were established.