THE COMPARISON OF THE ANTIOXIDATIVE PROPERTIES OF METHANOLIC EXTRACTS FROM FRESH AND DRIED TOMATOES

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ABSTRACT

IN THIS STUDY, TWO VARIETIES OF TOMATO (LYCOPERSICON ESCULENTUM MILL.),I TIEN HUNG AND SHENG NEU, WERE USED AS MATERIALS, AND SAMPLED AS FRESH, FREEZE DRIED, AND HOT AIR DRIED TOMATOES. THE ANTIOXIDATIVE COMPONENTS OF THESE SAMPLES WERE EXTRACTED USING METHANOL AS A SOLVENT, AND THE ANTIOXIDATIVE PROPERTIES OF METHANOLIC EXTRACTS WERE STUDIED. IN THE ANALYSIS OF REDUCING POWER, IT WAS FOUND THAT THE METHANOLIC EXTRACT FROM FREEZE DRIED SHENG NEU TOMATO HAD THE HIGHEST REDUCING POWER, THOSE FROM FRESH AND FREEZE DRIEDI -TIEN HUNG TOMATOES AND FRESH SHENG NEU TOMATO HAD THE NEXT ONES, THOSE FROM HOT AIR DRIE -D SHENG NEU AND I TIEN HUNG TOMATOES HAD THE THIRD ONES, AND BHA AND ALPHA-TOCOPHEROL HAD THE LOWEST. IN THE ANALYSIS OF FERROUS ION CHELATING POWER, IT SHOWED THE METHANOLIC EXTRACTS FROM FREEZE DRIED AND HOT AIR DRIED I TIEN HUNG TOMATOES HAD THE HIGHEST VALUES, THOSE FROM FR -ESH I TIEN HUNG, FREEZE DRIED AND HOT AIR DRIED SHENG NEU TOMATOES HAD THE NEXT ONES.BHA AND ALPHA-TOCOPHEROL EXHIBITED NO FERROUS ION CHELATING POWER. IN THE ANALYSIS OF DPPH SCAVENGING ACTIVITY, ALL THE TOMATO SAMPLES EXHIBITED HIGH SCAV -ENGING ACTIVITY AT A LOW CONCENTRATION ABOUT 2MG/ML, WHICH WAS CLOSE TO THOSE OF BHA AND ALPHA-TOCOPHEROL. IN THE QUANTITATIVE ANALYSIS OF ANTIOXIDATIVE COMPONENTS, ALL THE FRESH TOMATO SAMPLES HAD THE HIGHEST CONTENT OF ASCORBIC ACID; ALL THE TOMATO SAMPLES CONTAINED A LOW QUANTITY OF FLAVONOIDS,WHICH WAS LESS THAN 10 MG/100 G DRY SAMPLE;HOT AIR DRIED I TIEN HUNG AND SH -ENG NEU TOMATO SAMPLES HAD A HIGH CONTENT OF TOTAL PHENOLICS;THE FRESH SHENG NEU TOMATO SAMPLE CONTAINED THE HIGHEST QUANTITY OF LYCOPENE.

Keywords : ANTIOXIDATIVE PROPERTIES, DPPH SCAVENGING ACTIVITY,FERROUS ION CHELATING POWER,FREEZE DRYING,HOT AIR DRYING,LYCOPENE,REDUCING POWER, TOMATO.

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