

<b>Title:</b>	<b>Quality Changes of Frozen Broccoli Stored at Different Temperatures</b>
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<p><b>Abstract:</b> (Your abstract <u>must</u> use Normal style and <u>must</u> fit in this space. Your abstract should be no longer than 300 words. This space will 'expand' over 2 pages as you add text/diagrams into it.)</p>	<p>Freezing is an efficient food preservation process. However, when temperature is not conveniently selected and controlled, products may suffer significant quality losses, thus affecting consumers' acceptability.</p> <p>The objective of this study was to evaluate broccoli quality changes along storage under frozen conditions, and to estimate kinetic parameters of quality attributes changes.</p> <p>Broccoli samples (<i>Brassica oleracea</i> L.), after blanching at 100 °C for 30s were frozen at -35 °C for 30min (vertical freezer - <i>Refriger</i>) and stored under four different temperatures (-7, -15, -25 and -80 °C), for a total of 120 days. Samples were collected in different time periods and quality parameters, such as colour (<i>Minolta CR-300</i> colorimeter; CIE L*a*b* scale), texture (TA-Hdi texture analyser – <i>Stable Micro System</i>), ascorbic acid and water loss during defrost were evaluated.</p> <p>Results revealed that broccoli became softer and lost greenness throughout storage time. Ascorbic acid content decreased and water loss increased. Quality changes were more evident at the highest storage temperature of -7 °C.</p> <p>Experimental data of quality attributes changes were successfully described by first order kinetic models, with an Arrhenius-type parameters temperature dependence.</p>