

Almond virgin oil: parameters of regulated physicochemical quality and stability

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This work presents an exhaustive bibliographic review on the parameters of regulated physicochemical quality and stability applied to virgin almond oil and their results. Four parameters define regulated physicochemical quality on vegetable oils: (1) Free acidity; (2) Peroxide index; (3) Absorbance in the ultraviolet (K_{270} and K_{232}); and (4) Iodine value. Maximum acidity values found on almond oils varied between 0.76 and 9.6^o, values that, as a general rule, are very high compared to those typically obtained in olive oil. Regarding the peroxide index, values ranged from 0.28 to 15.6 meq O₂/kg and were almost always lower than the maximum values established by Codex Alimentarius for no refined oils. R index (K_{232}/K_{270}), that compares absorbance to 232 and 270 nm, indicative of conjugation of dienes and trienes, respectively, was a good indicator of oil quality. The iodine value found on almond oil ranged between 96 and 101. Another important parameter for the study of oils quality was the oxidative stability, understood as the oils susceptibility to lipid oxidation that causes undesired flavors and smells. This stability improves with the presence of natural antioxidants in almond oil.

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