## S4-3

Physical and chemical traits of almond kernels of the local almond populations in Morocco: commercial and industrial end-uses.

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## **Abstract**

The physical and chemical traits of five local populations of almond seedlings from Morocco were studied in order to evaluate the possibilities of their commercial and industrial valorization. Nut weight ranged between 1.15 and 7.39g, and kernel weight between 0.54 and 1.85g, but with most accessions being characterized by small nuts and kernels, hard shell, broad kernel, pronounced wrinkles and double kernels. For the chemical traits, the ranges of variation for oil content (48.7-64.5%), oleic acid (61.8-80.2%), linoleic acid (11.4-26.0%), palmitic acid (5.6-7.7%), stearic acid (1.3-3.1%), and palmitoelic acid (0.4.09%) percentages agreed with previous results in almond, but the protein content (14.1-35.1%) showed that some genotypes had higher values than previously recorded in almond. Some genotypes from mountain regions showed kernels with very high oil content, establishing a possible differentiation according to their geographical origin. These differences may allow establishing a geographical denomination for almond products. Although the physical quality of the kernels of these populations was low, the chemical composition offers the possibility of some specialized uses which could improve their marketable value

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