

## GENETIC DIVERSITY IN AN ALMOND GERMPLASM COLLECTION: APPLICATION OF A CHEMOMETRIC APPROACH

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Genetic diversity of the international almond (*Prunus amygdalus* Batsch) collection situated at the CITA, Zaragoza, Spain, was characterized by applying a chemometric approach. Oil and the major fatty acids were determined in 77 almond cultivars from 12 countries. The results revealed high genetic variability of the studied traits among the cultivars. Clustering of the cultivars from similar countries would suggest the existence of different almond populations. The present results did not show any clear separation of cultivars according to their geographical origin. The chemical composition of almond kernel could be used to study the genetic diversity of almond cultivars, but not to study its evolution around the world. The highest values of oleic and lowest of linoleic acids were determined in ‘Bonifacio’ and ‘Mollese’ from Italy, ‘Yosemite’ from USA, and ‘Pestañeta Menuda’ from Spain. These cultivars could be incorporated into almond breeding program to increase kernel quality.