Table of Contents

Editorial Board

For Authors

- Authors Declaration
- Instruction to Authors
- Guide for Authors
- Copyright Statement
- Submission

For Reviewers

- Guide for Reviewers
- Reviewers Login

Subscription

Czech J. Food Sci.

Fıratlıgil-Durmuş E., Šárka E., Bubník Z.:

Image vision technology for the characterisation of shape and geometrical properties of two varieties of lentil grown in Turkey

Czech J. Food Sci., 26 (2008): 109-116

Geometrical features of lentil seeds (*Lens culinaris* Medik) were analysed using the image analysis LUCIA system Ver. 3.52. The values of the weight of 1000 kernels kernel density, specific volume, specific surface area, and surface area of 1000 kernels of red and green lentils were determined as 66.61 and 138.56 g, 1504.5 and 1376.4 kg/m3, 0.6647 and 0.7265 cm3/g, 0.594 and 0.579 m2/kg, 395.4 and 801.9 cm2,, respectively. The lentil volume was simulated by an oblate spheroid and two sphere segments and the volumes obtained with both models were compared with that obtained by pycnometric method. Percentage differences of the two sphere segment

approximation for red and green lentils were 4.4% and 4.2%, respectively. The height (thickness) of lentils was constant and practically the same with both varieties (2.6 mm) and therefore it was possible to simplify the geometrical models. Thus, 2D image analysis is suitable for a quick evaluation of the specific volume and surface area of grains on the basis of the projected area