

DISCUSSION AND CONCLUSION

Potato tuber is heterogeneous material and specimens varied a lot. The variation is larger for cooked samples than for raw potatoes, according to THYBO, VAN DEN BERG (2002). The findings of this study illustrate obvious differences between textural properties of potato varieties. It is not only the variety what is the important influence. For example it was investigated by NUNN et al. (2006) that some vegetables had different values of texture score depending on type of boiling. Important influences are also the soil, a fertilizers or weather condition. But only with real values we can compare sufficiently different groups of specimens under various conditions (SOLOMON, JINDAL, 2007). Next our research will concentrate on these external influences on the texture of the potatoes. Our aim is to create useful database which would characterize each potato variety by texture and other analyses.

REFERENCES

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- THYBO, A.K., VAN DER BERG, F. (2002). Full uniaxial compression curves for predicting sensory texture quality of cooked potatoes. *J Texture Stud*, 33, 119-134.

NON-DESTRUCTIVE SORTING OF POTATOES

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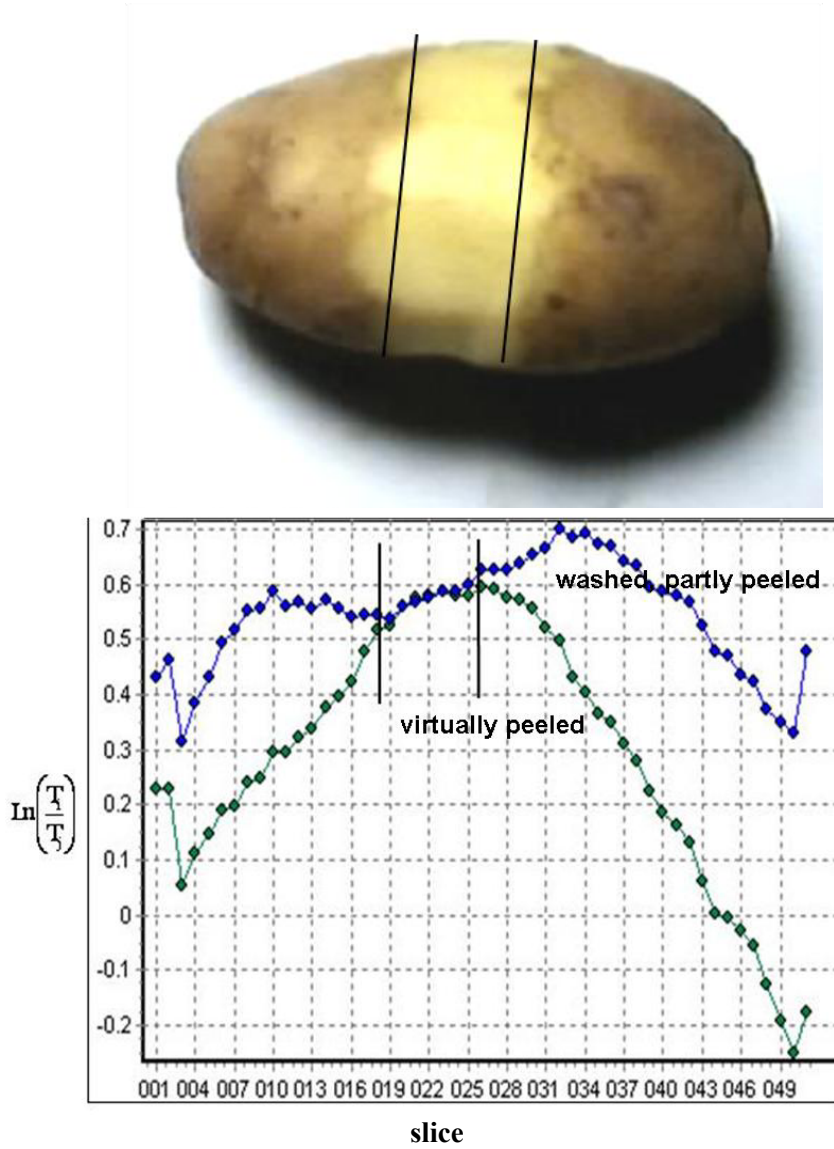
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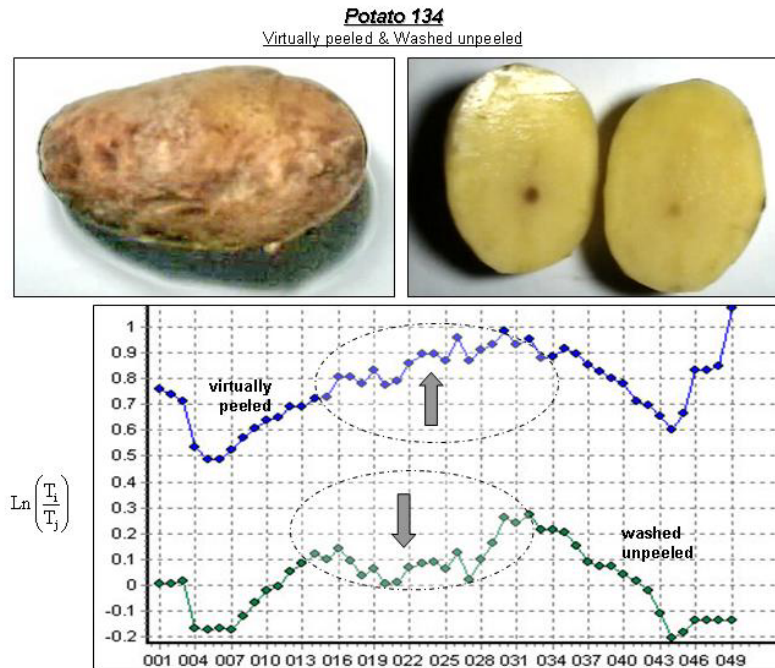
ABSTRACT

The internal quality of potatoes and other vegetables and fruits is an important quality factor for both consumers and food industry. There are several diseases and defects, which have no effect to the quality of potato skin. Therefore internal defects remain invisible to human and also to ordinary camera.

Potato 146



slice
Figure 1.
Partly peeled potato tuber



slice

Figure 2.

The strongly defective peel masks the small internal defect.

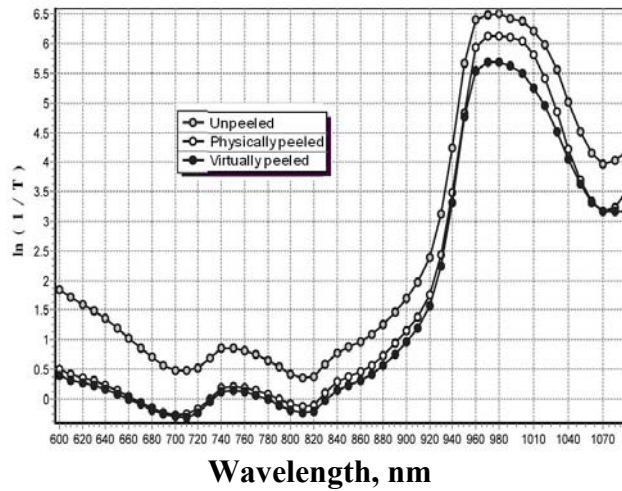


Figure 3.

Transmittance spectra of unpeeled, physically and virtually peeled potato tuber (variety BINTJE) with a skin injured by scab (Sample 257)

V at V-camera stands for "virtually peeling". In this method and technology the potato, or other skinned fruit or vegetable, is virtually peeled by measuring the NIR transmission of potatoes and simultaneously measuring the NIR reflection from the potato skin.

**NON - DESTRUCTIVE PHOTOSYNTHETIC DETERMINATION OF
BEAN PLANTS (PHASEOLUS VULGARIS L.)
RESPONSE TO SALT STRESS**

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Table 1

Parameters of chlorophyll fluorescence in dark adapted leaves of control and salt stressed bean plants. (* P<0.5; ** P<0.1;)

		Fo	Fm
cv. Lody	Control	549±24	2115±47
	NaCl	623±21** (123)	1720±58 (81)
	Na ₂ SO ₄	715±31** (130)	1620±66 * (76)
cv. Gina	Control	577±25	2185±51
	NaCl	625±19 (108)	1813±47 (82)
	Na ₂ SO ₄	690±21* (119)	1618±62**(77)
cv. Tara	Control	560±28	2080±22
	NaCl	585±22 (105)	1872±48 (90)
	Na ₂ SO ₄	620±19 (111)	1830±31 (88)
		Fv	Fv/Fm
cv. Lody	Control	1566±48	0.740±0.028
	NaCl	1117±29* (65)	0.645±0.031 (87)
	Na ₂ SO ₄	975±51** (62)	0.601±0.030 (81)
cv. Gina	Control	1608±44	0.735±0.029
	NaCl	1188±22* (72)	0.655±0.032 (89)
	Na ₂ SO ₄	992±51** (64)	0.589±0.019* (80)
cv. Tara	Control	1525±71	0.733±0.033
	NaCl	1287±44* (84)	0.687±0.040 (93)
	Na ₂ SO ₄	1210±61 *(79)	0.661±0.037 (90)