1993 Potato Flavor Study

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RESULTS AND DISCUSSION

Three potato lines including Centennial Russet, CO 80011-5 and CO 81082-1, were boiled intact, baked at 400^{0}F for 60 minutes or cut into fry cuts and deep fat fried in 390^{0}F for four minutes. The resulting volatiles were extracted and selectively analyzed using gas chromatography.

The total pyrazines from the above variables are summarized below: (Data are in ppm).

Potato Line	Boiled	Baked	Fried
CO 80011-5	34	62	72
CO 81082-1	30	48	70
C. Russet	36	65	77

As can be seen, all three lines had similar profiles relative to the total amount of pyrazines present. It can also be seen that the severity of the heat process influenced the total amount of pyrazines present. The lowest level was found in the boiled potatoes, while the largest amount was found in the fried potatoes. It should be noted that the presence of fat also encourages the formation of pyrazines, which could account for the higher level in the fried product.