aglycone in the Arlo rapeseed. On raising the temperature of the FFAP column to 200C and injecting the methylene chloride extract for these two meals, one additional peak was found for the Tanka sample and three additional peaks for the Arlo sample.

These peaks were not present if the meals were extracted without treatment with myrosinase. The one peak in the Tanka sample and one of the peaks in the Arlo sample had the same retention time as phenylethyl isothiocyanate. Collection of this peak from a preparative run of GLC gave an oil with an infrared spectrum identical to that of phenylethyl isothiocyanate. The infrared spectra of the additional two peaks in the Arlo sample showed that these were also isothiocyanates. The spectra were quite similar and indicated that the compounds were not aromatic. Further work is being done to characterize these two compounds.

Comparison of peak sizes with that of known amounts of phenylethyl isothiocyanate gave a total additional amount of isothiocyanate of 0.3 mg/g for the Tanka meal and 1.1 mg/g for the Arlo meal. The total aglycone released for the two samples then becomes 0.084 mmole/g and 0.060 mmole/g compared with 0.080 and 0.065 mmole/g of sulfate. These results confirm that the micromethod is a quantitative assay of isothiocyanates and oxazolidinethione in rapeseed meal.

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Addendum

The two unknown isothiocyanates have subsequently been identified by the authors as 4-methylthio-butyl isothiocyanate and 5-methylthio-pentyl isothiocyanate.