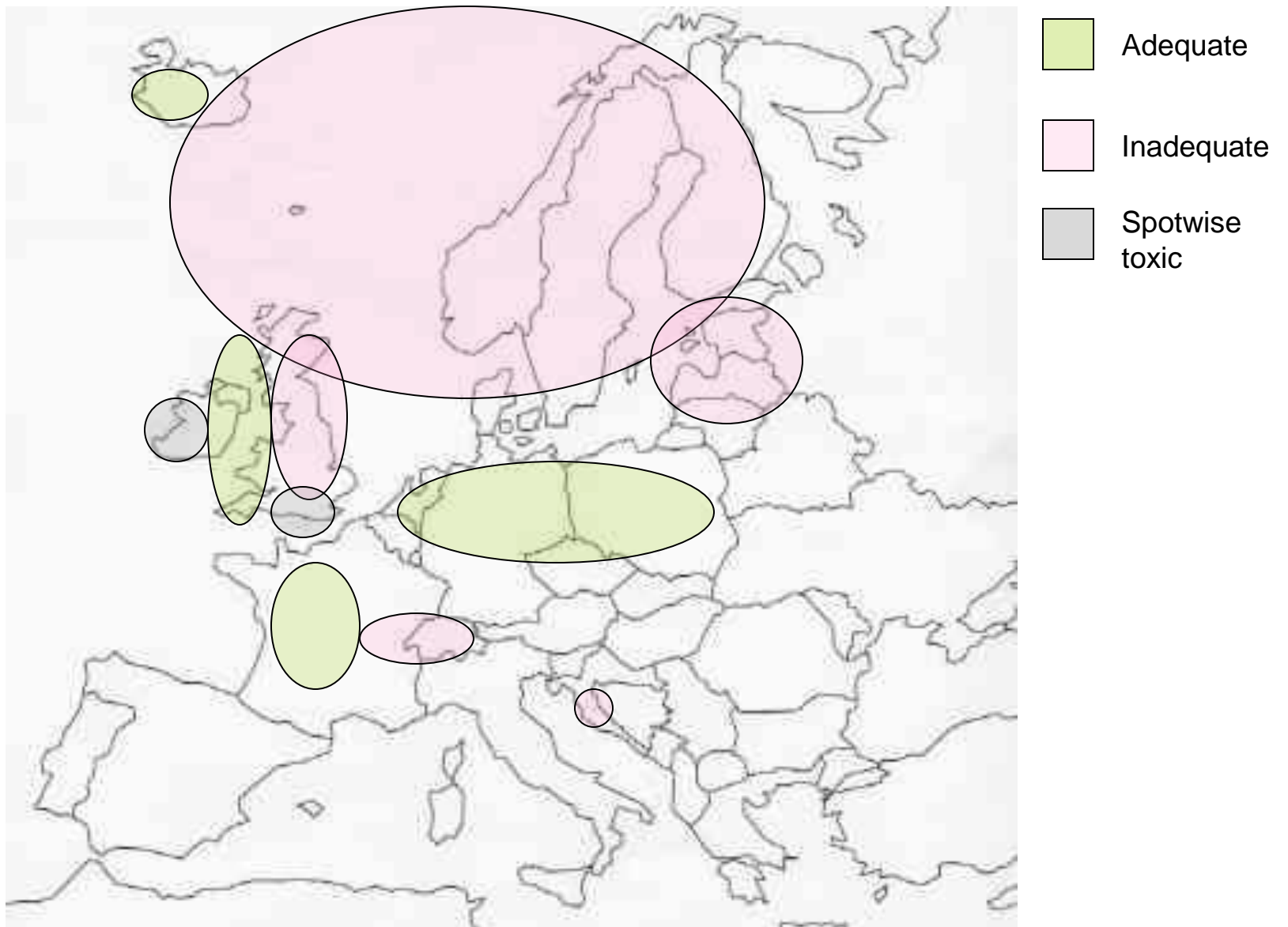


Selenium content of milk in nine countries

Ekholm P, Viitak A, Pehrson B, Stagsted J, Rayman M, Sterna V, Debski B, Sanftleben P, Surai P, Malbe M.

Selenium in Nordic-Baltic Food Chain



Gissel-Nielsen, 1987. Selenium in the soil-plant system. In: Selenium in Biology and Medicine

Selenium in Nordic-Baltic food chain

- network for researcher
- 10 countries around the Baltic Sea and UK
- Funded by Nordforsk

milk samples from nine EU countries

Aim: to get an idea of the variation in milk Se content between countries

Table 1. Details of samples.

Country	Sample
Finland	semi-skimmed, 1.5% fat one of them lactose free and UHT one low lactose and UHT
Denmark	semi-skimmed, 1.5% fat two of them organic two of them unhomogenised
Sweden	standard milk, 3.0% fat
Great Britain	semi-skimmed milk, 1.6 -1.7% fat
Estonia	standard milk, 2.5 % fat one of them Ca supplemented
Latvia	standard milk, 2.5 % fat
Lithuania	standard milk, 2.5 % fat (3) semi-skimmed milk, 1.5 % fat (1)
Germany	semi-skimmed milk, 1.5% fat two of them UHT milk
Poland	standard milk. 2 % fat

The method

Freeze drying of the samples



Drying +70 °C overnight



Microwave digestion of the
samples

conc HNO₃ and H₂O₂

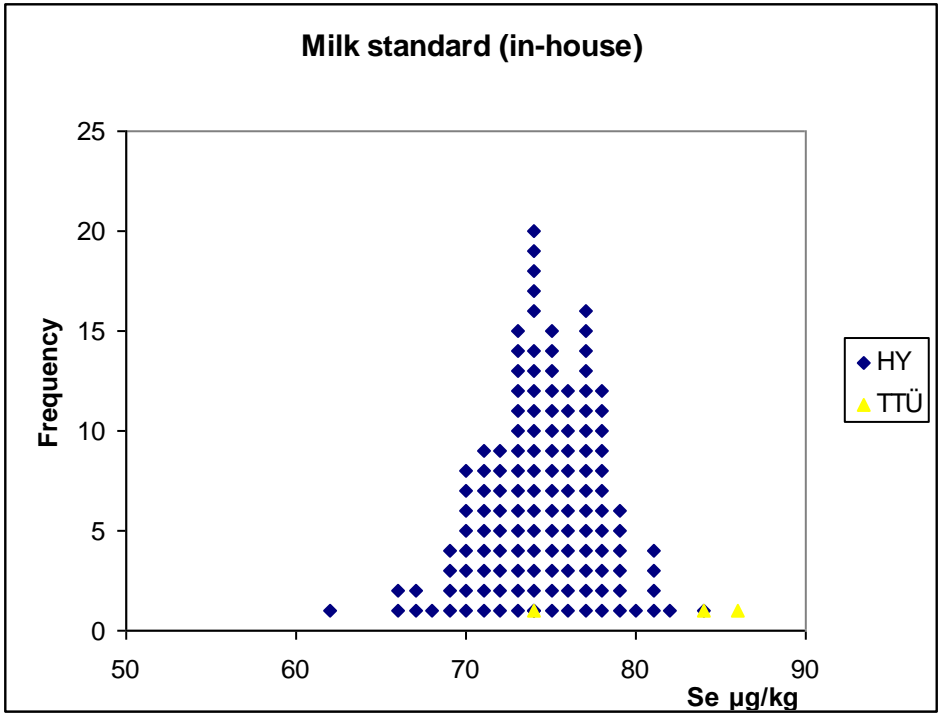


Mesurement of Se by AAS hydride
generation method

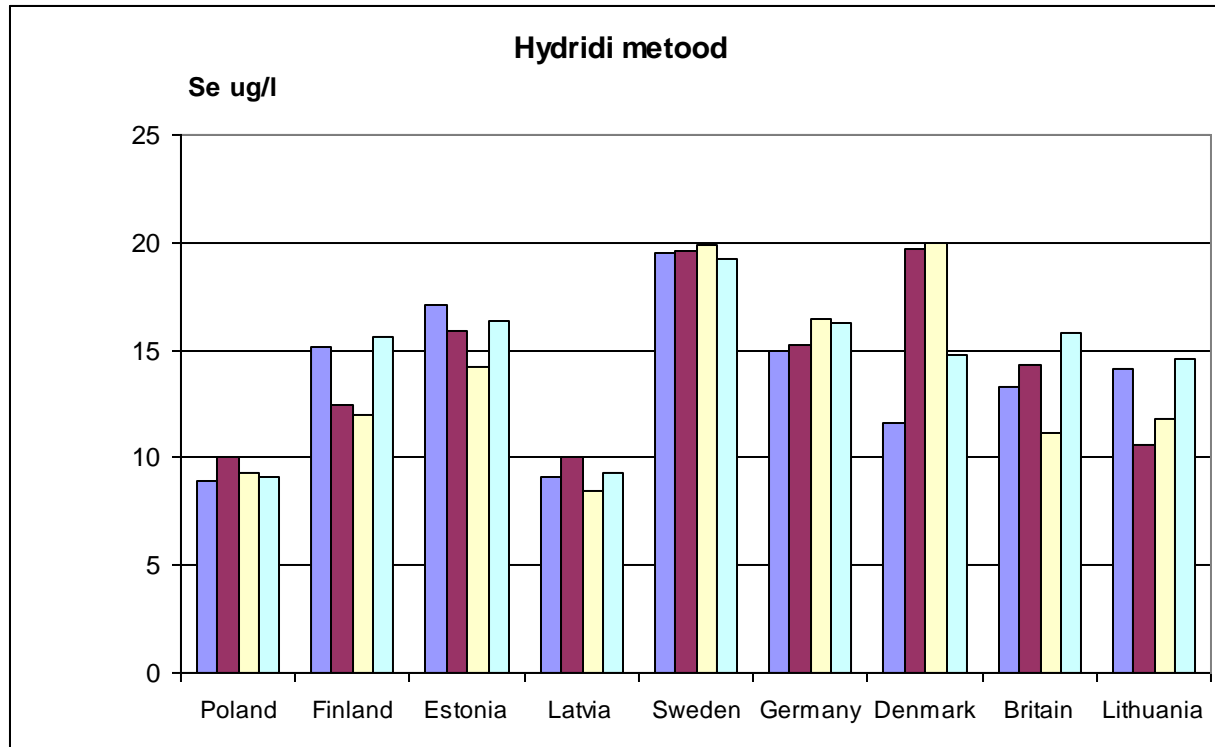
Quality control

- analyses repeated twice with two duplicate
- Se recovery 97%
- In-house reference sample

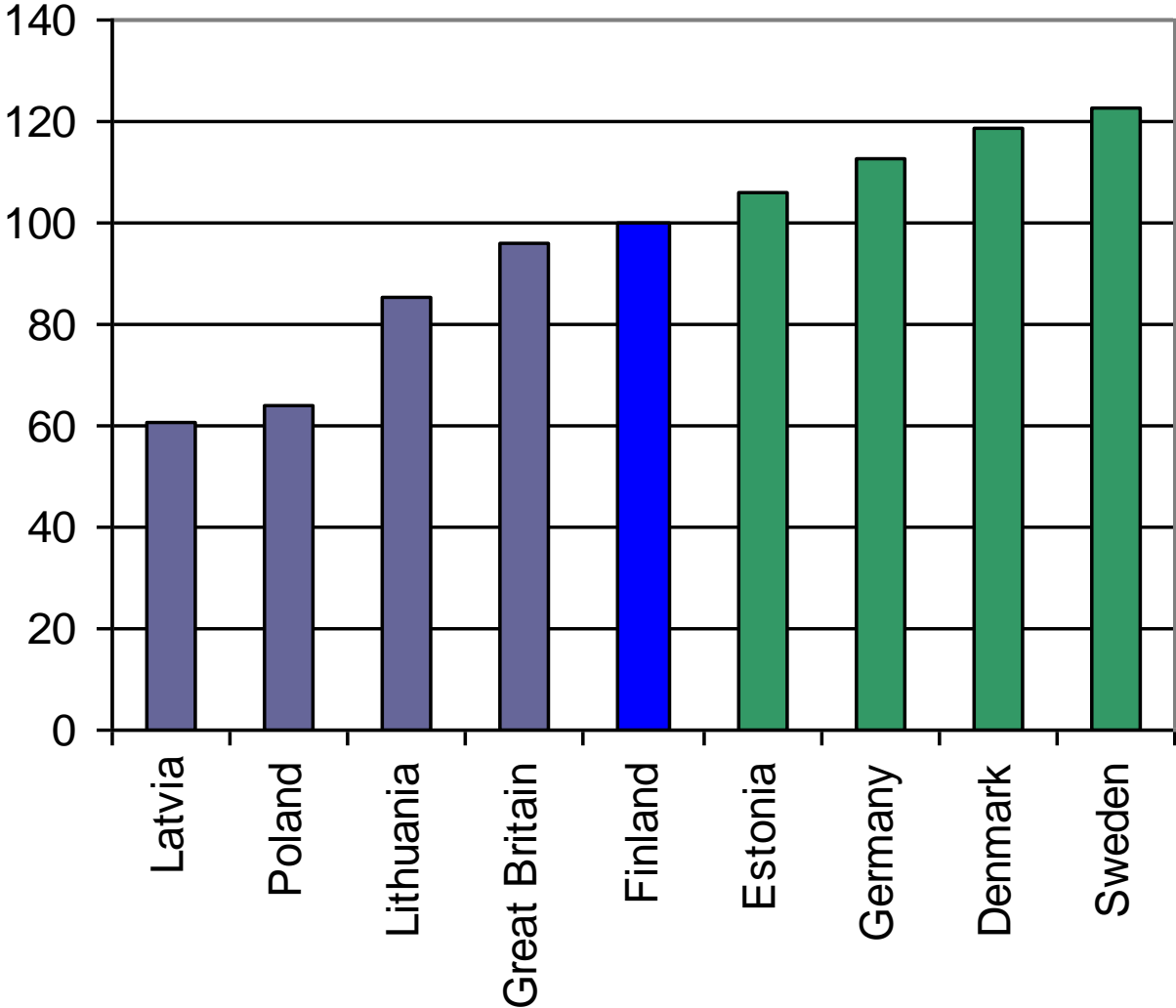
Milk standard (in-house)



Se content in milk



Relative Se content in milk



Conclusion

- Se situation in a number of countries has altered during the last few years
- Our results demonstrate the need to update the data on the current Se situation in countries

Acknowledgement

- This research was supported by Alltech Ltd.