Two methods with different extract sample processing (IAC and SPE) for vitamin B12 analysis by LC in infant formula and adult/pediatric nutritionals have been compared. Moreover, the both references of IACs cartridges available have been tested.

Both procedures (IAC or SPE) vitamin B12 is extracted from products with a sodium acetate buffer in the presence of sodium or potassium cyanide.

The single supplier for the IAC cartridges proposes 2 references which are codes P80 and P88.

The bed volume of the antibody/gel mixture is the same for both formats but IAC P88 has a built-in reservoir that can accommodate 9 ml sample extract.

In cases of dispute and for calibration purposes the reference method should be recommended and it is important to know how results provided by methods currently used compare to the official one.

The present work reports the comparison between ISO 20634 and LC/UV detection with Immunoaffinity Extraction (according AOAC 2011.08) using both IACs references available. The comparison has been accomplished by single analysis of 11 samples (including a SRM) representing most of the products in the marketplace of infant formula and adult/pediatric nutritionals.

**CONCLUSION**

The comparison between results in all different matrices obtained with the three methods is shown below.

Comparable results were obtained with the three methods. Results on Standard Reference Material (SRM 1849a Infant/Adult Nutritional Formula) were equivalent and not statistically different from referenced value (4.82 ± 0.85 μg/100 g).

Although both procedures (IAC and SPE) compare well when performing linear regression analysis.

**REFERENCES:**


This poster was presented at the 4th International Vitamin Conference in Copenhagen (25-27 May 2016).