Pesticide Residues in Milk
MONITORING OF PCBs AND ORGANOPHOSPHOROUS

Abstract

A study was conducted to monitor pesticide residues in milk samples collected from different regions of Egypt. The levels of organochlorine pesticides (OCPs), organophosphorous pesticides (OPPs), and PCBs were determined. The results showed that OPPs were the most common residues, followed by OCPs and PCBs. The highest levels of OPPs were detected in milk samples from the Nile Valley, while the highest levels of OCPs were found in milk samples from the Delta region. The levels of PCBs were found to be below detection limits. The study highlights the need for further research and monitoring to ensure the safety of milk products for consumption.

1. Introduction

Pesticides are widely used in agriculture to control pests and diseases, but their residues in milk can pose health risks to consumers. The objective of this study was to monitor pesticide residues in milk samples collected from different regions of Egypt.

2. Materials and Methods

The study involved the collection of milk samples from different regions of Egypt. The samples were analyzed for organochlorine pesticides (OCPs), organophosphorous pesticides (OPPs), and PCBs. The levels of each pesticide were determined using gas chromatography and mass spectrometry.

3. Results

The results showed that OPPs were the most common residues, followed by OCPs and PCBs. The highest levels of OPPs were detected in milk samples from the Nile Valley, while the highest levels of OCPs were found in milk samples from the Delta region. The levels of PCBs were found to be below detection limits.

4. Conclusion

The study highlights the need for further research and monitoring to ensure the safety of milk products for consumption.
DISCUSSION

The rapidity of the problem with food contamination...

RESULTS

Extraction and clean up:

The extraction and clean up was conducted...

Standards used:

Samples were collected from the admitting portions of the...

The samples were collected from the admitting portions of the...
Figure 1: Standard of PCB's, Gas chromatogram of aroclor 1254 (a); aroclor 1221 (b); aroclor 1016 (c); aroclor 1242 (d) and aroclor 1248.

Figure 2: Gas chromatogram of a bulk milk sample extract (a) and a packed sample extract (b).
and CAPMAS estimates.

Whereas, the Estimated Daily Intake (EDI) of Dimethoate residues for Egyptian infants from milk was 15 times that of the general population. Yet, it was less than 3% of the established Acceptable Daily Intake (ADI) being 0.000243 mg/kg bw.

No data were available regarding daily intake of Dimethoate.

Finally, the pollution with pesticide should be avoided and taken care through handling and packing will be done.

REFERENCES


