Journal
J. Biol. Chem. Environ. Sci., 2017, Vol. 12(4): 111-133
http://biochenv.blogspot.com.eg/

EFFECT OF STORAGE ON THE SOME ACARICIDES PESTICIDES

Nahed M. M. Selim and M. I Hala.

Pesticides Analysis Res. Div., Central Agric Pesticides Lab., Agric Res. Center. Dokki, Giza Egypt

ABSTRACT

The effect of storage stability test on the degradation of Chlorfenapyr, pyridaben and Hexythiazox was studied. The results showed varying degradation rate of Chlorfenapyr, pyridaben and Hexythiazox active ingredients in its formulation during storage stability test. The calculated $T_{0.5}$ values were 37.52, 29.23 and 131.28 days for Chlorfenapyr, pyridaben and Hexythiazox respectively. From this finding it is clean that Hexythiazox is more stable than Chlorfenapyr and pyridaben. On the other hand study the effect of storage at 54$\pm$ 2^{o}C on Chlorfenapyr, pyridaben and Hexythiazox it was found that percentage loss were 31.95, 35.03 and 7.12 % after 14 days, respectively. Also it was results illustrated of the initial data before storage were 23.69, 14.96 and 9.97 % respectively. So these results for Chlorfenapyr, pyridaben and Hexythiazox are in agreement with FAO.

On the other hand, GC–MS and LC–MS were used to compare the fragmentations of acaricides pesticides (Chlorfenapyr, pyridaben and Hexythiazox). Results showed that retention time (Rt) were 17.4, 21.77 and 17.9 minutes before storage for Chlorfenapyr, pyridaben and Hexythiazox. But become 16.14, 15.12 and 19.10, respectively after storage.

Key Words: Acaricides, GC-MS, LC–MS, Chlorfenapyr, Hexythiazox and pyridaben.