DESCRIPTION OF THE STUDY MATERIAL
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OMS 3031 (XRD-473, Hexafluron) was first synthesized by Rigterink in 1981 (Sbragia et al., 1983). This IGR is a substituted urea (acyl urea) compound manufactured by Dow Chemical Company, U.S.A., in 1985. This IGR is chemically known as N-(((3,5-dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl)amino)carbonyl)-2,6-difluoro-benzamide, with the structure,

![Chemical Structure](image)

and molecular formula C$_{16}$H$_8$Cl$_2$F$_6$N$_6$O$_3$ having molecular weight 461. It was received gratis as 5% emulsifiable concentrate through World Health Organisation, Geneva. This compound is known for its biological activity as Insect Growth Regulator, inhibiting chitin synthesis. It has very low mammalian toxicity with an acute oral LD$_{50}$ 5000 mg/kg and dermal LD$_{50}$ 2000 mg/kg.

Three species of vector mosquitoes utilized for this study were obtained from the cyclic colonies maintained at Vector Control Research Centre, Pondicherry. The larvivorous fish, predatory insects, cyclopoid copepods and ostracods were collected from their natural habitats in Pondicherry. Parasitic nematode, *Romanomermis iyengari* was obtained from the culture maintained at the VCRC.