

## Composition de la cire d'abeille

Monoesters	$\text{CH}_3\text{-}(\text{CH}_2)_x\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}(\text{CH}_2)_y\text{-}\text{CH}_3$
Diesters	1. $\text{CH}_3\text{-}(\text{CH}_2)_x\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{CH}}}\text{-}(\text{CH}_2)_y\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}(\text{CH}_2)_z\text{-}\text{CH}_3$ 2. $\text{CH}_3\text{-}(\text{CH}_2)_x\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{CH}}}\text{-}(\text{CH}_2)_n\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}(\text{CH}_2)_x\text{-}\text{CH}_3$
Triesters	1. $\text{CH}_3\text{-}(\text{CH}_2)_x\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{C}}}\text{-}[\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{CH}}}\text{-}(\text{CH}_2)_y\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}]\text{_2}\text{-}(\text{CH}_2)_z\text{-}\text{CH}_3$ 2. $\text{CH}_3\text{-}(\text{CH}_2)_x\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{CH}}}\text{-}(\text{CH}_2)_y\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{C}}}\text{-}[\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{CH}}}\text{-}(\text{CH}_2)_m\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}(\text{CH}_2)_x\text{-}\text{CH}_3$
Hydroxy Monoesters	1. $\text{HO}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{CH}}}\text{-}(\text{CH}_2)_y\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}(\text{CH}_2)_z\text{-}\text{CH}_3$ 2. $\text{HO}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{CH}}}\text{-}(\text{CH}_2)_m\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}(\text{CH}_2)_x\text{-}\text{CH}_3$
Acid Monoesters	$\text{CH}_3\text{-}(\text{CH}_2)_x\text{-}\overset{\text{O}}{\underset{\parallel}{\text{C}}}\text{-}\text{O}\text{-}\overset{\text{CH}_3}{\underset{ }{\text{CH}}}\text{-}(\text{CH}_2)_y\text{-}\text{CO}_2\text{H}$

### Structure des principaux esters de la cire d'abeille

Richard J. Hamilton, *Waxes : chemistry, molecular biology and functions*, The Gily Press, Dundee, 1995, p. 47.