



# Cannabis Diseases, Inc.

## Product Sheet

### Rhamnolipid Solution

#### Description:

Aqueous solution of rhamnolipids and water. Rhamnolipid are glycosides of rhamnose (6-deoxymannose) and  $\beta$ -hydroxydecanoic acid. Product is produced via natural fermentation and processed to remove any bacterial material.

#### Composition

Product is mixture of two primary rhamnolipid:

##### **Mixture of Mono- and Di-rhamnolipid (RLL and RRLL)**

Decanoic acid, 3-[[6-deoxy-2-O- (6-deoxy- $\alpha$ -L-mannopyranosyl)- $\alpha$ -L-mannopyranosyl] oxy]-, 1-(carboxymethyl) octyl ester, mixture. with 1-(carboxymethyl) octyl 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl) oxy] decanoate (CA INDEX NAME)

**CAS Registry Number:** 147858-26-2

**Molecular Formulae:** C32 H58 O13 & C26 H48 O9

##### **Di-Rhamnolipid, (RRLL)**

Decanoic acid, 3-[[6-deoxy-2-O- (6-deoxy- $\alpha$ -L-mannopyranosyl)- $\alpha$ -L-mannopyranosyl] oxy]-, 1-(carboxymethyl)octyl ester (CA INDEX NAME)

**CAS Registry Number:** 4348-76-9

**Molecular Formula:** C32 H58 O13

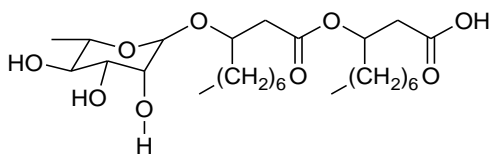
##### **Mono-Rhamnolipid (RLL)**

Decanoic acid, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-, 1-(carboxymethyl)octyl ester (CA INDEX NAME)

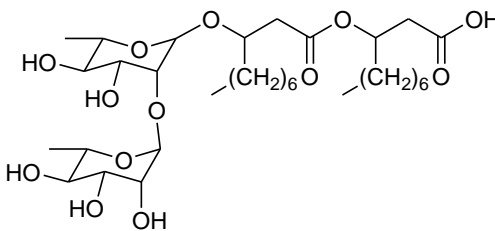
CAS Registry Number: 37134-61-5

Molecular Formula: C<sub>26</sub> H<sub>48</sub> O<sub>9</sub>

**Structures:**



**R1 or RLL**



**R2 or RRL**

**Typical Properties and Handling**

**Safety:**

See associated MSDS

**Appearance:**

Light Green

**Specific gravity:**

1.04

**PH:**

7 – 8

**Odor:**

Soapy

**Stability:**

Stable at room temperature

Unstable at pH extremes due to hydrolysis of glycosidic bond

**Suitable Diluents:**

Water, most common alcohols

**Solubility in Water:**

Highly soluble at neutral pH

**Volatility:**

Not volatile