The degree of reduction of organic matter through microbial activity is calculated. It is assumed that the mineral fraction in the dry matter is not attacked by microbes and therefore the process remains constant. The organic matter is reference quantity for the starting material.

$$\Delta oTS = \frac{m*(100-WG)}{100} * \frac{GV_A}{100} - \frac{100-GV_A}{100-GV_E} * \frac{GV_E}{100} * m * \frac{100-WG}{100}$$

$$degree\ of\ reduction = \frac{\Delta oTS * 10000}{m*(100-WG)/GV_A} = \frac{10000*(GV_E-GV_A)}{GV_A*(GV_E-100)}$$

m = moist mass [Mg]
GV_A = Ignition loss prior to rotting process [% TS]
ΔoTS = reduced organic dry matter [Mg]
WG = water content [% FS]
GV_E = ignition loss after rotting process [% TS]
TS_A = Dry matter at the start [Mg]
TS_E = Dry matter at the end [Mg]

$$oTS_A = \frac{m*(100-WG)*GV_A}{10000}$$

$$¿oTS_E = \frac{(100-GV_A)*GV_E*m*(100-WG)}{(100-GV_E)*10000}$$

$$¿TS_A = m*(1-0{,}01*WG)$$

$$¿TS_E = \frac{100*oTS_E}{100-GV_E}$$