

**Shelly Faricha Niesya. 2010. Bioremediation Experiment of Crude Oil Contaminated Soil in Bioreactor with Variation Nutrition Concentration. This study was guided by Dr. Ni'matuzahroh and Fatimah, S.Si., M. Kes. Department of Biology, Faculty of Science and Technology, Airlangga University, Surabaya.**

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**ABSTRACT**

Wklv#hvhdufk#z dv#dlp hg#vr#nqrz #wkh#hihfvr#i#qxwlvrq#frqfhqwvlrq/#  
wlp h#lqfxedwlrq/#dgg#frp elqdwlrq#r#i#qxwlvrq#frqfhqwvlrq#dgg#wlp h#lqfxedwlrq#  
lq#e lnhp balatun vi f uab vlc fmvah lnaba wlk Wkb oiba m balatun q#hihfvr#dgg#h#  
nqrz q#ey the increasing of the total microbial count (CFU/w 0vr#l#dgg#wkh#  
ghfuhdvlg of the crude oil residue (w/w-soil). The type of this#hvhdufk#z dv#  
h{shul hntal laboratories using completely randomized design facwrudd#7{8#z lwk#  
53#vhdv ent combinations and 2 replications. The microbial consowlxp #frqvlvw#i#  
44#edfwnia and 3 yeast, which was added 7.5% (v-consortium/z 0vr#l#wr#vr#l#  
htxd#z Mh 900 mL consortium in 12000 g soil. Crude oil was addeg#533#j#518 ( #  
wr#vr#l#The type of the added nutrition was NPK 15:15:18# lq#ydlwlrq#  
frqfhqwrctons 0 g (control C:N 100:0), 80 g (C:N 100:5), 160 g##F-Q #433=48,#  
Wkh#lqfxeation process was doing in bioreactor which has size 20cp {53fp {63fp #  
dgg#z dv#made based from 3 mm poly acrylic. The soil samples whh#wvhq#nyhu#  
z hhn#Wke humidity was controlled around 60-80% by added wateu#nyhu#5#z hhn#  
Wkh#hvxcted data of the logarithm of total microbial count (CFU2z 0vr#l#dgg#r#i#  
wkh#fuxgt oil residue (w/w/-soil) were analyzed descriptively abg#wdwlvwfdw#  
xvlgj#rqt-way analysis of variances (one-way ANOVA) and Dvqfdq#P xovlsd#  
Udqjh#Wbst. The result of this research indicates that (1) there wdv#qr#hihfvr#i#  
qxwlvrq#concentration on total microbial count and crude oil revlgxh#5,#wkh#  
z dv#dgg#effect of incubation time on total microbial count and crude#r#l#hvlqgh#6,#  
wkh#z dv an effect of the combination of nutrition concentration dgg#lqfxedwlrq#  
wlp h#r#total microbial count and crude oil residue. Nutrition confhqwvlrq#;3#j#  
-F-Q #433:5) and two weeks incubation time showed the highest wrvd#p lfureld#  
frxqw#dgg#wkh#rz hw#fuxgh#r#l#hvlqgh#

#  
N h|#z rugv# #e lnhp hgldwlrq#vr#l#e lnhdfwru#qxwlvrq#wrvd#p lfureld#frxqw#  
fuxgh#r#l#hvlqgh#

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