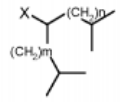
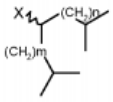
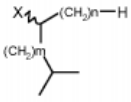
According to an embodiment, Z is selected from one of the following formulae, wherein X is NH or O:



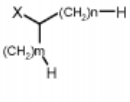
m = n = 0, 1, 2, 3



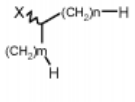
m # n = 0, 1, 2, 3



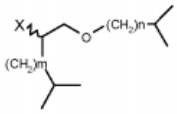
m = 0, 1, 2, 3
n = 0, 1, 2, ...9



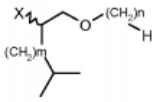
m = n = 0, 1, 2,...9



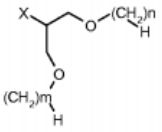
m # n = 0, 1, 2,...9



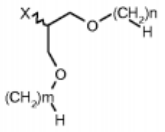
m = 0, 1, 2, 3
n = 0, 1, 2, ...5



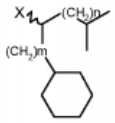
m = 0, 1, 2, 3
n = 0, 1, 2, ...7



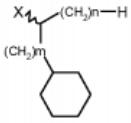
m = n = 1, 2, 3,...7



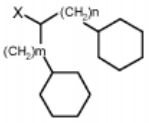
m # n = 1, 2, 3,...7



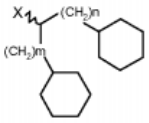
m = 0, 1, 2, 3
n = 0, 1, 2,...7



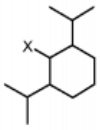
m = 0, 1, 2, 3
n = 0, 1, 2,...9

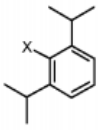


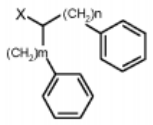
m = n = 0, 1, 2, 3



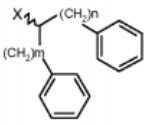
m = 0, 1, 2, 3
n = 0, 1, 2,...9



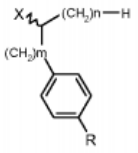




m = n = 0, 1, 2, 3

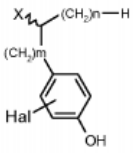


m = 0, 1, 2, 3
n = 0, 1, 2,...9



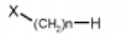
R = H, Cl, Br, I

m = 0, 1, 2, 3
n = 0, 1, 2,...9

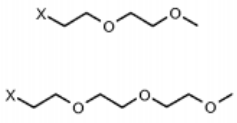


Hal = Cl, Br, I

m = 0, 1, 2, 3
n = 0, 1, 2,...9



n = 1, 2, 3,...10



According to an embodiment, the chelator C is selected from the group consisting of: