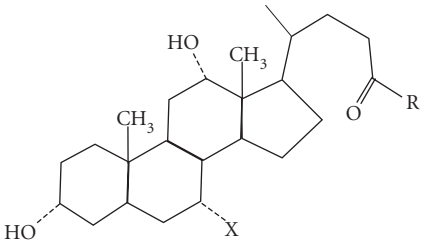
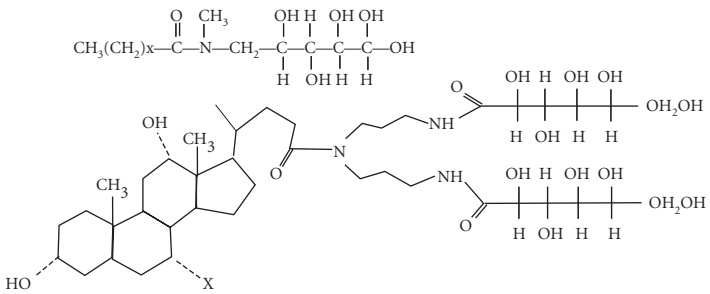
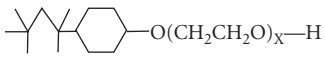
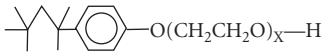
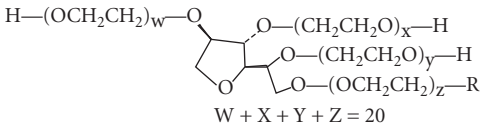
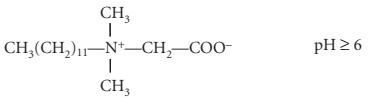
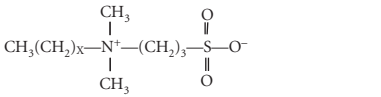
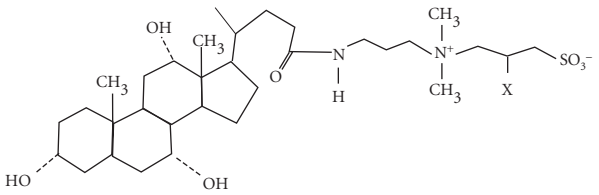
Structure and Classification of Detergents

Detergent class	General structure	Examples
Alkyl glycosides	$R\text{-}O\text{-}(CH_2)_x\text{-}CH_3$ $R\text{-}S(CH_2)_x\text{-}CH_3$	R = glucose x = 8, *n*-nonyl-β-D-glucopyranoside x = 7, *n*-octyl-β-D-glucopyranoside x = 6, *n*-heptyl-β-D-glucopyranoside x = 5, *n*-hexyl-β-D-glucopyranoside R = maltose x = 11, dodecyl-β-D-maltoside x = 9, decyl-β-D-maltoside R = glucose, x = 7, octyl-β-D-thioglucopyranoside
Bile acids		x = H, R = O-Na^+, sodium deoxycholate x = H, R = $NHCH_2CH_2SO_3$-Na^+, sodium taurodeoxycholate x = H, R = $NHCH_2CO_2$-Na^+, sodium glycodeoxycholate x = OH, R = O-Na^+, sodium cholate x = OH, R = $NHCH_2CH_2SO_3$-Na^+, sodium taurocholate x = OH, R = $NHCH_2CO_2$-Na^+, sodium glycocholate
Glucamides		x = 8, MEGA-10 x = 7, MEGA-9 x = 6, MEGA-8 x = H, Deoxy Big CHAP x = OH, Big CHAP

Structure and Classification of Detergents (Continued)

Detergent class	General structure	Examples
Polyoxyethylenes, monodisperse and polydisperse		x = 9-10, reduced TRITON® X-100 x = 7-8, reduced TRITON® X-114
		x = 9-10, TRITON® X-100, NP-40 x = 7-8, TRITON® X-114
	$CH_3(CH_2)_y$-$O(CH_2CH_2O)_x$-H	y = 12, X = 8, GENAPOL® X-080 y = 12, X = 10, GENAPOL® X-100 Y = 11, x = 8, $C_{12}E_8$ y = 11, x = 9, $C_{12}E_9$, THESIT®, LUBROL® PX y = 11, x = 10, GENAPOL® C-100 Y = 11, x = 23, BRIJ® 35
	HO(CH$_2$CH$_2$O)x-(CH(CH$_3$)-CH$_2$O)y-(CH$_2$CH$_2$O)$_z$H	X = 98, Y = 67, Z = 98, PLURONIC® F-127®
		R = $C_{11}H_{23}CO_2$-(laurate), TWEEN® 20 R = $C_{17}H_{33}CO_2$-(oleate), TWEEN® 80
Zwittergents		EMPIGEN BB® (*n*-dodecyl-N,N-dimethylglycine)
		x = 7, ZWITTERGENT® 3-08 x = 9, ZWITTERGENT® 3-10 x = 11, ZWITTERGENT® 3-12 x = 13, ZWITTERGENT® 3-14 x = 15, ZWITTERGENT® 3-16
		x = H, CHAPS x = OH, CHAPSO