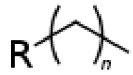
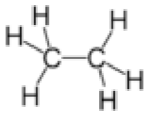
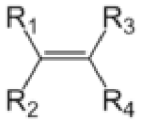
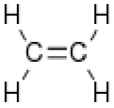
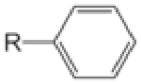
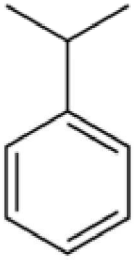
E) Sample Chemical "Functional Groups" Associated With Chemicals Addressed in This Matter.

Exhibit E:

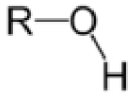
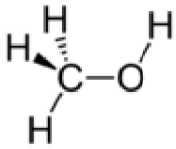
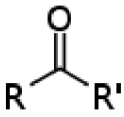
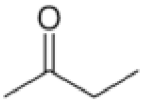
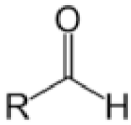
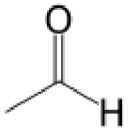
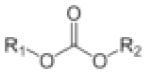
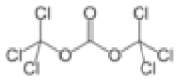
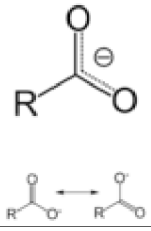
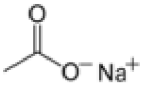
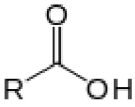
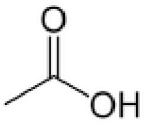
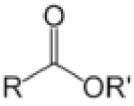
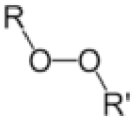
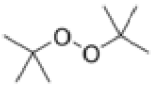
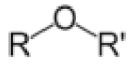
List of Chemical Functional Groups Common In Contraband

1) Hydrocarbons

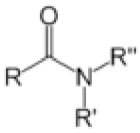
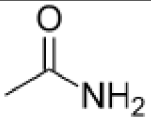
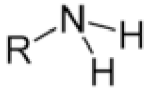
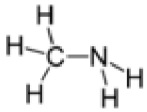
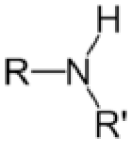
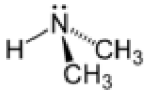
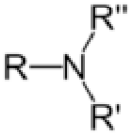
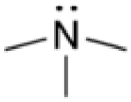
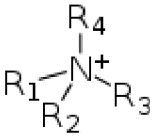
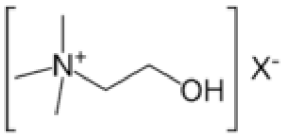
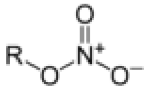
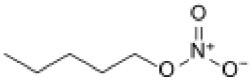
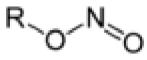
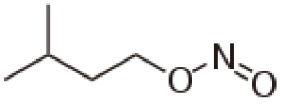
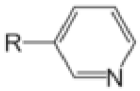
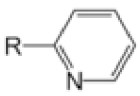
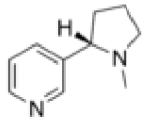
Chemical class	Group	Formula	Structural Formula	Prefix	Suffix	Example
Alkane	Alkyl	RH		alkyl-	-ane	 Ethane
Alkene	Alkenyl	$R_2C{=}CR_2$		alkenyl-	-ene	 Ethylene *(Ethene)*
Alkyne	Alkynyl	RC≡CR'		alkynyl-	-yne	 Acetylene *(Ethyne)*
Benzene derivative	Phenyl	RC_6H_5 RPh		phenyl-	-benzene	 Cumene *(2-phenylpropane)*

In all the examples shown, the designation "R" means "an organic substituent". It may be the same or some other functional group, or may represent the remainder of a given molecule relative to a spercific functional group.

2) Groups Containing Oxygen

Chemical class	Group	Formula	Structural Formula	Prefix	Suffix	Example
Alcohol	Hydroxyl	ROH		hydroxy-	**-ol**	 Methanol
Ketone	Carbonyl	RCOR'		-oyl- (-COR') or oxo- (=O)	**-one**	 Butanone (Methyl ethyl ketone)
Aldehyde	Aldehyde	RCHO		formyl- (-COH) or oxo- (=O)	**-al**	 Ethanal (Acetaldehyde)
Carbonate	Carbonate ester	ROCOOR		(alkoxycarbonyl)oxy-	alkyl **carbonate**	 Triphosgene *(Di(trichloromethyl) carbonate)*
Carboxylate	Carboxylate	$RCOO^-$		carboxy-	-oate	 Sodium acetate *(Sodium ethanoate)*
Carboxylic acid	Carboxyl	RCOOH		carboxy-	-oic **acid**	 Acetic acid *(Ethanoic acid)*
Ester	Ester	RCOOR'		alkanoyloxy- or alkoxycarbonyl	alkyl alkan**oate**	 Ethyl butyrate *(Ethyl butanoate)*
Peroxide	Peroxy	ROOR		peroxy-	alkyl **peroxide**	 Di-tert-butyl peroxide
Ether	Ether	ROR'		alkoxy-	alkyl **ether**	 Diethyl ether *(Ethoxyethane)*

3) Groups Containing Nitrogen

Chemical class	Group	Formula	Structural Formula	Prefix	Suffix	Example
Amide	Carboxamide	$RCONR_2$		carboxamido- or carbamoyl-	-amide	 Acetamide *(Ethanamide)*
Amines	Primary amine	RNH_2		amino-	-amine	 Methylamine *(Methanamine)*
	Secondary amine	R_2NH		amino-	-amine	 Dimethylamine
	Tertiary amine	R_3N		amino-	-amine	 Trimethylamine
	4° ammonium ion	R_4N^+		ammonio-	-ammonium	 Choline
Nitrate	Nitrate	$RONO_2$		nitrooxy-, nitroxy-	alkyl **nitrate**	 Amyl nitrate *(1-nitrooxypentane)*
Nitrite	Nitrosooxy	RONO		nitrosooxy-	alkyl **nitrite**	 Isoamyl nitrite *(3-methyl-1-nitrosooxybutane)*
Pyridine derivative	Pyridyl	RC_5H_4N	  	4-pyridyl (pyridin-4-yl) 3-pyridyl (pyridin-3-yl) 2-pyridyl (pyridin-2-yl)	-pyridine	 Nicotine