provided that when R is greater than 8 carbons, the ratio of hetero atoms to carbon atoms is at least 1:2; and

M is selected from an ammonium cation $(NH_2R^1R^2)^+$ or an ammonium cation $(NH_3R)^+$ wherein R, R^1 and R^2 are independently linear or branched organic groups containing at least one carboxylate moiety and one amino moiety, and optionally be substituted, interrupted, or both with oxygen, sulfur, or nitrogen-containing moieties, or with cyclic alkyl or aryl moieties containing up to 10 carbon atoms.

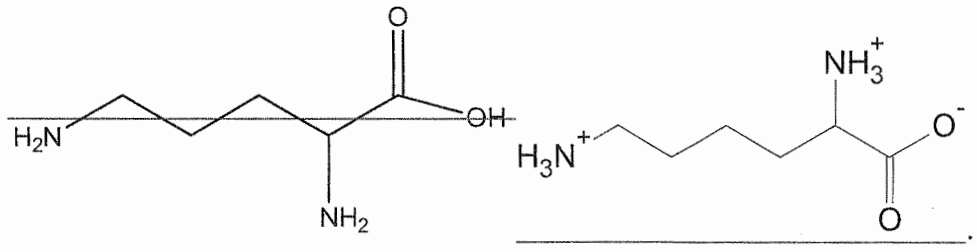
2. A composition of Claim 1, wherein R_f is a C_4 to C_6 linear perfluoroalkyl, A is $(CH_2)_k$, and k is 2.

3. A composition of Claim 1, wherein R_f is a C_4 to C_6 linear perfluoroalkyl, A is $(CH_2CF_2)_m(CH_2)_n$, m is 1, and n is 2.

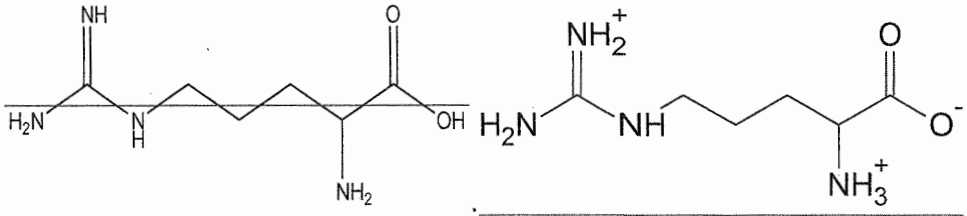
4. A composition of Claim 1, wherein R_f is a C_3 linear perfluoroalkyl A is $O(CF_2)_2(CH_2)_r$, and r is 2.

5. A composition of Claim 1, wherein M is an ammonium cation $(NH_2R^1R^2)^+$ wherein R^1 and R^2 are independently linear or branched organic groups containing at least one carboxylate moiety and one amino moiety.

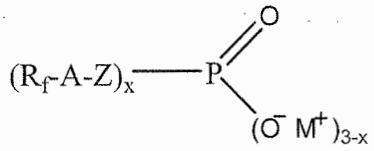
6. A composition of Claim 1, wherein M is



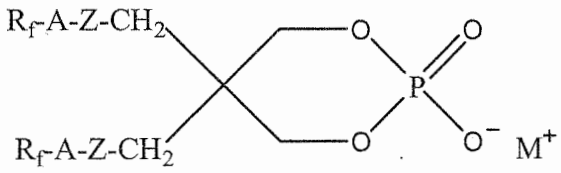
7. A composition of Claim 1, wherein M is



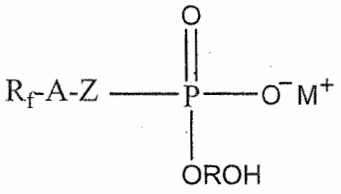
8. A method of lowering the surface tension of a liquid comprising contacting a liquid to a composition comprising formula I, formula II, or formula III



(Formula I)



(Formula II)



(Formula III)

wherein

R_f is a C_1 to C_6 linear or branched perfluoroalkyl optionally interrupted by one, two or three ether oxygen atoms;

x is 1 to 2;

A is $(CH_2)_k$, $(CH_2CF_2)_m(CH_2)_n$, $(CH_2)_oSO_2N(CH_3)(CH_2)_p$, $O(CF_2)_2(CH_2)_r$, or $OCHFCF_2OE$;

Z is O or S;

m is 1 to 4;

k, n, o, p, and r are each independently 1 to 20;