prising: a barrier base cream and one or more active moieties. The base cream comprises poly(tetrafluoroethylene) resins dispersed in perfluorinated polyether oils. A chemical family of active moieties that has been found to be very effective with the base cream is the polyalkenimines. Effective formulations containing polyalkenimines and other active materials in the base cream are listed in Table 1. The active barrier cream is applied to the skin prior to exposure of persons at risk of exposure to harmful chemicals to provide an active barrier to protect the skin. The active barrier cream chemically or physically reacts with harmful chemicals such as CWA to neutralize these harmful chemicals while the barrier properties of the cream prevent penetration of harmful chemicals through the cream to the skin.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] **FIG. 1** is a flow diagram of the active TSP Decision Tree Network for efficacy evaluation;

[0017] **FIG. 2** is series of ^{31}P NMR Spectra that measures the hydrolysis of Phosphorofluoridic acid diisopropyl ester (DFP) in D_2O with 2.5 wt % Lupasol WF (ICD 3732);

[0018] **FIG. 3** is the ^1H NMR spectrum of 2-chloroethylethylsulfide (CEES) in d_6-DMSO;

[0019] **FIG. 4** is the ^1H NMR spectrum of 2-chloroethylethylsulfide (CEES) in d_6-DMSO+100 eq D_2O after 18 h;

[0020] **FIG. 5** is the ^1H NMR spectrum of CEES+2.5 wt % Lupasol WF (ICD 3732) in 100 eq D_2O in d_6-DMSO after 12 h;

[0021] **FIG. 6** is a graph showing GD vapor penetration cell data of a 0.15 mm thick aTSP barrier in 20 hours;

[0022] **FIG. 7** is a graph showing HD vapor penetration cell data for the cumulative amount of HD vapor through active TSP over 20 hours;

[0023] **FIG. 8** is a graph showing a M8 paper test of the time to GD and HD liquid breakthrough for active TSPs containing polyalkenimines;

[0024] **FIG. 9** is a graph showing HD liquid and GD liquid penetration cell data of the cumulative amount of HD and GD liquid through active TSP" over 20 hours;

[0025] **FIG. 10** is a graph showing HS-SPME/GC-MS;

[0026] **FIG. 11** is a graph comparing polyalkenimines at 2.5wt % in D_2O solution against DFP challenge;

[0027] **FIG. 12** is a graph showing results of active TSPs containing polyalkenimines;

[0028] **FIG. 13** is a graph showing GD vapor rabbit lethality test giving results of active TSPs containing polyalkenimines;

[0029] **FIG. 14** is a graph showing VX liquid rabbit lethality test giving results of active TSPs containing polyalkenimines.

DETAILED DESCRIPTION

[0030] Candidate Active Moieties

[0031] The types of materials that neutralize harmful agents use three main modes of action: oxidation, reduction or hydrolysis.

[0032] Operating criteria, however, restricts the selection of the active materials. Thus, the active moiety must not irritate the skin, react with insecticides or camouflage paints or be lack thermal or temporal stability. This restriction eliminates many of the most active species. Furthermore, the active moiety must be incorporated into a highly fluorinated environment that is not amenable to many reaction pathways.

[0033] Table 1 is a list of formulations containing amines, polyalkenimines and/or its derivatives and other active materials that are acceptable for use in the present invention:

TABLE 1

LIST OF AMINES, POLYALKENIMINES AND/OR DERIVATIVES FOR ACTIVE TOPICAL SKIN PROTECTANTS

ICD #	Active Moiety	% Active	% Other	% PFPE	% PTFE
3470	Lupasol P (ICD3720)	10	Fluorolink 7004 (ICD3719) 2% Water 7%	38	43
3471	Lupasol P (ICD3720)	15	Fluorolink 7004 (ICD3719) 3% Water 6%	27	49
3630	DEAM (ICD3604)	2	Light Surfactant (ICD 2853) 1% Water 1%	49	46
3631	DEAM (ICD3605)	2	Light Surfactant (ICD 2853) 1% Water 1%	48	48
3632	DEAM (ICD3606)	2	Light Surfactant (ICD 2853) 1% Water 1%	49	47
3712	Lupasol P (ICD# 3720)	9	Fluorolink 7004 (ICD3719, 3%), water (8%)	48	32
3713	Lupasol P (ICD# 3720)	7	Fluorolink 7004 (ICD3719, 3%), water (10%)	48	32
3714	Lupasol P (ICD# 3720)	20	Fluorolink 7004 (ICD3719, 2%), water (3%)	60	15