Claims

1. A kit for marking, monitoring and/or detecting alteration of a fuel and/or solvent comprising:
(i) at least one marker (S); and
(ii) at least one substance (A), wherein the substance (A) is capable of interacting with at least one laundering agent.

2. The kit according to claim 1, wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent.

3. The kit according to any one of the preceding claims, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

4. The kit according to any of the preceding claims, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

5. The kit according to any one of the preceding claims, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI

Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

6. The kit according to any one of the preceding claims, further comprises at least one marker (C), marker (C) being a quantitative marker.

7. The kit according to claim 6, wherein marker (C) and/or marker (S) is completely or partially resistant or not resistant to at least one laundering agent.

8. The kit according to any one of claim 6 or 7, wherein marker (S) is more resistant to at least one laundering agent than marker (C).

9. The kit according to any one of the preceding claims, wherein the laundering agent is selected from the group consisting of: clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material, adsorbent material and a mixture thereof.

10. The kit according to any one of the preceding claims , wherein the marker (S) is a quantitative or qualitative marker.

11. The kit according to any one claims 6 to 10, wherein the marker (S) is a quantitative marker different from marker (C).

12. The kit according to any one of the preceding claims, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alphanaphthylamino)-propane, squaraines phthalocyanine(s),naphthalocyanine, CI Solvent Red, CI Solvent Red 2,

CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 151, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

13. The kit according to any one of the preceding claims, wherein the substance (A) is further capable of being detected.

14. The kit according to any one of the preceding claims, wherein marker (S) and the substance (A), and optionally marker (C), are provided in the form of a mixture.

15. The kit according to any one of the claims 6 to 13, wherein the kit comprises
(i) at least one marker (C), one marker (S) and one substance (A) for addition to a first fuel and/or solvent; and
(ii) at least one marker (C) for addition to a second fuel; both markers (C) being the same.

16. A fuel and/or solvent comprising:
(i) at least one marker (S); and
(ii) at least one substance (A), wherein substance (A) is capable of interacting with at least one laundering agent; and
optionally, (iii) at least one marker (C), wherein the marker (C) is a quantitative marker.

17. The fuel and/or solvent according to claim 16, wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent.

18. The fuel and/or solvent according to claim 16 or claim 17, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

19. The fuel and/or solvent according to any one of claims 16 to 18, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

20. The fuel and/or solvent according to claim 16, wherein marker (S) is a quantitative or qualitative marker.

21. The fuel and/or solvent according to any one of claims 16 to 20, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

22. The fuel and/or solvent according to any one of claims 16 to 21, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine,

radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

23. A fuel composition comprising the fuel and/or solvent according to any one of claims 16 to 22.

24. The fuel composition according to claim 23, wherein the fuel composition comprises a mixture of at least one fuel and/or solvent comprising marker (C) and the fuel and/or solvent according to claim 16.

25. A method of marking fuel and/or solvent, the method comprising:

marking a fuel and/or solvent with:

(i) at least one marker (S); and

(ii) at least one substance (A), wherein the substance is capable of interacting with at least one laundering agent.

26. The method according to claim 25, wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent.

27. The method according to any one of claims 25 or 26, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active

charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

28. The method according to any one of claims 25 to 27, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

29. The method according to any one of claims 25 to 28, wherein the method further comprises marking the fuel and/or solvent with at least one marker (C), marker (C) being a quantitative marker.

30. The method according to any one of claims 25 to 29, wherein the method is a method of marking a first fuel and/or solvent and a second fuel to allow detection of a mixture of the first fuel and second fuel, the method comprising:

(I) marking at least one first fuel and/or solvent with:

(i) at least one marker (S); and

(ii) at least one substance (A), wherein the substance is capable of interacting with at least one laundering agent; and

(II) marking at least one second fuel with at least one marker (C), wherein marker (C) is a quantitative marker.

31. The method according to claim 30, wherein the method is a method of marking a first fuel and a second fuel to allow detection of a mixture of the first fuel and/or solvent and second fuel, the method comprising:

(I) marking at least one first fuel and/or solvent with:

(i) at least one marker (C), wherein marker (C) is a quantitative marker;

(ii) at least one marker (S); and

(iii) at least one substance (A), wherein the substance is capable of interacting with at least one laundering agent; and

(II) marking at least one second fuel with at least one marker (C);

both markers (C) being the same.

32. The method according to any one of claims 25 to 31, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

33. The method according to any one of claims 25 to 32, wherein substance (A) is further capable of being detected.

34. The method according to any one of claims 25 to 33, wherein marker (S) is fully or partially resistant to at least one laundering agent.

35. The method according to any one of claims 25 to 34, wherein the laundering agent is selected from the group consisting of: clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material, adsorbent material and a mixture thereof.

36. The method according to any one of claims 29 to 35, wherein marker (S), marker (C) and optionally substance (A) , are capable of being resistant to partial or complete removal or capable of being partially or completely removed from the fuel by at least one laundering agent.

37. The method according to any one of claims 29 to 36, wherein treatment to remove at least some amount of marker (S), results in the partial or complete removal of marker (C) from the fuel.

38. The method according to any one of claims 29 to 37, wherein marker (S) is a quantitative marker and is different from the marker (C).

39. The method according to any one of claims 25 to 37, wherein marker (S) is a quantitative or qualitative marker.

40. The method according to any one of claims 25 to 39, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

41. The method according to any one of claims 25 to 40, wherein marker (C), marker (S), and/or optionally substance (A) is detectable by at least one of the following: gas chromatography (GC), gas chromatography mass spectroscopy (GCMS), high performance liquid chromatography (HPLC), X-Ray diffraction, immunoassay, Raman spectroscopy, luminescence, ultra-violet spectroscopy, infra-red spectroscopy, near infra-red spectroscopy or any combination thereof.

42. A method of monitoring, testing and/or detecting alteration of a first fuel with a second fuel and/or solvent, the second fuel and/or solvent comprising: (i) at least one marker (S); and (ii) at least one substance (A), wherein the substance (A) is capable of interacting with at least one laundering agent;
the method comprising:
(I) testing the fuel for the presence of marker (S), wherein the presence of marker (S) in the fuel is indicative that the fuel is altered; or
(II) testing the fuel for the presence of substance (A), wherein substance (A) is capable of being detected, and the presence of substance (A) is indicative that the fuel is altered; or
(III) testing the fuel for the presence of at least one laundering agent.

43. The method according to claim 42, wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent.

44. The method according to any one of claims 42 or 43, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

45. The method according to any one of claims 42 to 44, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

46. The method according to claim 42, wherein the second fuel and/or solvent further comprises at least one quantitative marker (C) having a predetermined concentration range; the method further comprising: testing the fuel for the presence of marker (C), wherein the presence of marker (C) in the fuel is indicative that the fuel is altered.

47. The method according to any one of claims 42 to 46, wherein the method is of monitoring, testing and/or detecting alteration of a first fuel with a second fuel

and/or solvent, the first fuel comprising at least one quantitative marker (C), and the second fuel and/or solvent comprising: (i) at least one quantitative marker (C), (ii) at least one marker (S); and (iii) at least one substance (A), wherein the substance (A) is capable of interacting with at least one laundering agent; both markers (C) being the same and at a predetermined concentration range;

the method further comprising:

(I) testing the fuel for the presence of the quantitative marker (C); wherein the presence of the marker (C) in the fuel having a concentration outside the predetermined concentration range or the absence of a marker (C) in the fuel is indicative that the fuel is altered; or

(II) testing the fuel for the presence of marker (C) within the predetermined concentration range and for the presence of marker (S), wherein the presence of marker (S) in the fuel is indicative that the fuel is altered; or

(III) testing the fuel for the presence of marker (C) within the predetermined concentration range, the absence of marker (S), and the presence of substance (A) is indicative that the fuel is altered.

48. The method according to any one of claims 42 to 47, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

49. The method according to any one of claims 42 to 48, wherein marker (S) is a quantitative or qualitative marker.

50. The method according to any one of claims 46 to 49, wherein marker (S) is a quantitative marker and is different from marker (C).

51. The method according to any one of claims 42 to 50, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

52. The method according to any one of claims 42 to 51, wherein the detecting of the presence of marker (C), marker (S), and/or optionally substance (A) is by the use of at least one of the following: gas chromatography (GC), gas chromatography mass spectroscopy (GCMS), high performance liquid chromatography (HPLC), X-Ray diffraction, immunoassay, Raman spectroscopy, luminescence, ultra-violet spectroscopy, infra-red spectroscopy, near infra-red spectroscopy or any combination thereof.

53. The method according to any one of claims 42 to 52, wherein the fuel and/or solvent has been treated by at least one laundering agent to remove at least some amount of marker (C), marker (S), or substance (A), or any combination thereof.

54. The method according to any one of claims 46 to 53, wherein marker (S), marker (C) and/or optionally substance (A), are capable of being partially or completely removed from the fuel and/or solvent by at least one laundering agent.

55. The method according to any one of claims 46 to 54, wherein a treatment to remove marker (S) results in the partial or complete removal of marker (C) from the fuel and/or solvent.

56. The method according to any one of claims 42 to 55, wherein the fuel and/or solvent has been treated with a laundering agent selected from the group consisting of: clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material, adsorbent material and a mixture thereof.

57. A method of monitoring, testing and/or detecting alteration of a fuel, the fuel comprising: (i) at least one marker (S); and (ii) at least one substance (A), wherein the substance (A) is capable of interacting with at least one laundering agent;
the method comprising:
(I) testing the fuel for the presence of marker (S), wherein the absence of marker (S) in the fuel is indicative that the fuel is altered; or
(II) testing the fuel for the presence of substance (A), wherein substance (A) is capable of being detected, the absence of substance (A) is indicative that the fuel is altered.

58. The method according to claim 57, wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent.

59. The method according to any one of claims 57 or 58, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active

charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

60. The method according to any one of claims 57 to 59, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

61. The method according to any one of claims 57 to 60, wherein marker (S) is a quantitative marker having a predetermined concentration range; the method further comprising: testing the fuel for the presence of marker (S), wherein the presence of marker (S) in the fuel having a concentration outside the predetermined concentration range is indicative that the fuel is altered.

62. The method according to any one of claims 57 to 61, wherein the fuel further comprises at least one quantitative marker (C) having a predetermined concentration range and is different from marker (S); the method further comprising: testing the fuel for the presence of marker (C) in the fuel, wherein the presence of marker (C) in the fuel having a concentration outside the predetermined concentration range is indicative that the fuel is altered.

63. The method according to any one of claims 57 to 62, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow

161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

64. The method according to any one of claims 57 to 63, wherein marker (S) is a quantitative or qualitative marker.

65. The method according to any one of claims 57 to 64, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

66. The method according to any one of claims 62 to 65, wherein the detecting of the presence of marker (C), marker (S), and/or optionally substance (A) is by the use of at least one of the following: gas chromatography (GC), gas chromatography mass spectroscopy (GCMS), high performance liquid chromatography (HPLC), X-Ray diffraction, immunoassay, Raman spectroscopy, luminescence, ultra-violet spectroscopy, infra-red spectroscopy, near infra-red spectroscopy or any combination thereof.

67. The method according to any one of claims 62 to 66, wherein the fuel has been treated by at least one laundering agent to remove at least some amount of marker (C), marker (S), or substance (A), or any combination thereof.

68. The method according to any one of claims 62 to 67, wherein marker (S), marker (C) and/or optionally substance (A), are capable of being partially or completely removed from the fuel by at least one laundering agent

69. The method according to any one of claims 62 to 68, wherein a treatment to remove marker (S) results in the partial or complete removal of marker (C) from the fuel.

70. The method according to any one of claims 57 to 69, wherein the fuel has been treated with a laundering agent selected from the group consisting of: clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

71. The method according to any one of claims 57 to 70, wherein the fuel is altered with at least a second or further fuel, a solvent, petrochemical or a mixture thereof.

72. An apparatus for monitoring, testing and/or detecting alteration of at least one fuel, the fuel and/or solvent comprising: (i) at least one marker (S); and (ii) at least one substance (A), wherein the substance (A) is capable of interacting with at least one laundering agent; the apparatus comprising at least one means for detecting the presence and/or quantity of at least maker (S) and/or substance (A).

73. The apparatus according to claim 72, wherein the fuel and/or solvent further comprises at least one quantitative marker (C).

74. The apparatus according to claim 72 or claim 73, wherein the detecting of the presence and/or quantity of marker (S), substance (A) and/or marker (C) is by the use of at least one of the following means: gas chromatography (GC), gas chromatography mass spectroscopy (GCMS), high performance liquid

chromatography (HPLC), X-Ray diffraction, immunoassay, Raman spectroscopy, luminescence, ultra-violet spectroscopy, infra-red spectroscopy, near infra-red spectroscopy or any combination thereof.

Claims

1. A kit for marking, monitoring and/or detecting alteration of a fuel and/or solvent comprising:
   (i) at least one marker (S); and
   (ii) at least one substance (A),
   wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent.

2. The kit according to claim 1, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

3. The kit according to claim 1 or claim 2, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

4. The kit according to any one of the preceding claims, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48,

CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

5. The kit according to any one of the preceding claims, further comprising at least one marker (C), marker (C) being a quantitative marker.

6. The kit according to claim 5, wherein marker (C) and/or marker (S) is completely or partially resistant or not resistant to at least one laundering agent.

7. The kit according to claim 5 or claim 6, wherein marker (S) is more resistant to at least one laundering agent than marker (C).

8. The kit according to any one of the preceding claims, wherein the laundering agent is selected from the group consisting of: clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material, adsorbent material and a mixture thereof.

9. The kit according to any one of the preceding claims , wherein the marker (S) is a quantitative or qualitative marker.

10. The kit according to any one of claims 5 to 9, wherein the marker (S) is a quantitative marker different from marker (C).

11. The kit according to any one of the preceding claims, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alphanaphthylamino)-propane, squaraines phthalocyanine(s),naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI

Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

12. The kit according to any one of the preceding claims, wherein the substance (A) is further capable of being detected.

13. The kit according to any one of the preceding claims, wherein marker (S) and the substance (A), and optionally marker (C), are provided in the form of a mixture.

14. The kit according to any one of claims 5 to 12, wherein the kit comprises
(i) at least one marker (C), one marker (S) and one substance (A) for addition to a first fuel and/or solvent; and
(ii) at least one marker (C) for addition to a second fuel; both markers (C) being the same.

15. A fuel and/or solvent comprising:
(i) at least one marker (S); and
(ii) at least one substance (A), wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent; and
optionally, (iii) at least one marker (C), wherein the marker (C) is a quantitative marker.

16. The fuel and/or solvent according to claim 15, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

17. The fuel and/or solvent according to claim 15 or claim 16, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

18. The fuel and/or solvent according to claim 15, wherein marker (S) is a quantitative or qualitative marker.

19. The fuel and/or solvent according to any one of claims 15 to 18, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

20. The fuel and/or solvent according to any one of claims 15 to 19, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine,

CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

21. A fuel composition comprising the fuel and/or solvent according to any one of claims 15 to 20.

22. The fuel composition according to claim 21, wherein the fuel composition comprises a mixture of at least one fuel and/or solvent comprising marker (C) and the fuel and/or solvent according to claim 15.

23. A method of marking fuel and/or solvent, the method comprising:

marking a fuel and/or solvent with:

(i) at least one marker (S); and

(ii) at least one substance (A),

wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent.

24. The method according to claim 23, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

25. The method according to claim 23 or claim 24, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

26. The method according to any one of claims 23 to 25, wherein the method further comprises marking the fuel and/or solvent with at least one marker (C), marker (C) being a quantitative marker.

27. The method according to any one of claims 23 to 26, wherein the method is a method of marking a first fuel and/or solvent and a second fuel to allow detection of a mixture of the first fuel and second fuel, the method comprising:

(I) marking at least one first fuel and/or solvent with:

(i) at least one marker (S); and

(ii) at least one substance (A), wherein the substance is capable of interacting with at least one laundering agent; and

(II) marking at least one second fuel with at least one marker (C), wherein marker (C) is a quantitative marker.

28. The method according to claim 27, wherein the method is a method of marking a first fuel and a second fuel to allow detection of a mixture of the first fuel and/or solvent and second fuel, the method comprising:

(I) marking at least one first fuel and/or solvent with:

(i) at least one marker (C), wherein marker (C) is a quantitative marker;

(ii) at least one marker (S); and

(iii) at least one substance (A), wherein the substance is capable of interacting with at least one laundering agent; and

(II) marking at least one second fuel with at least one marker (C);

both markers (C) being the same.

29. The method according to any one of claims 23 to 28, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane,

squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

30. The method according to any one of claims 23 to 29, wherein substance (A) is further capable of being detected.

31. The method according to any one of claims 23 to 30, wherein marker (S) is fully or partially resistant to at least one laundering agent.

32. The method according to any one of claims 23 to 31, wherein the laundering agent is selected from the group consisting of: clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material, adsorbent material and a mixture thereof.

33. The method according to any one of claims 26 to 32, wherein marker (S), marker (C) and optionally substance (A) , are capable of being resistant to partial or complete removal or capable of being partially or completely removed from the fuel by at least one laundering agent.

34. The method according to any one of claims 26 to 33, wherein treatment to remove at least some amount of marker (S), results in the partial or complete removal of marker (C) from the fuel.

35. The method according to any one of claims 26 to 34, wherein marker (S) is a quantitative marker and is different from the marker (C).

36. The method according to any one of claims 23 to 34, wherein marker (S) is a quantitative or qualitative marker.

37. The method according to any one of claims 23 to 36, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

38. The method according to any one of claims 23 to 37, wherein marker (C), marker (S), and/or optionally substance (A) is detectable by at least one of the following: gas chromatography (GC), gas chromatography mass spectroscopy (GCMS), high performance liquid chromatography (HPLC), X-Ray diffraction, immunoassay, Raman spectroscopy, luminescence, ultra-violet spectroscopy, infra-red spectroscopy, near infra-red spectroscopy or any combination thereof.

39. A method of monitoring, testing and/or detecting alteration of a first fuel with a second fuel and/or solvent, the second fuel and/or solvent comprising: (i) at least one marker (S); and (ii) at least one substance (A), wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent;

the method comprising:

(I) testing the fuel for the presence of marker (S), wherein the presence of marker (S) in the fuel is indicative that the fuel is altered; or

(II) testing the fuel for the presence of substance (A), wherein substance (A) is capable of being detected, and the presence of substance (A) is indicative that the fuel is altered; or

(III) testing the fuel for the presence of at least one laundering agent.

40. The method according to claim 39, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

41. The method according to claim 39 or claim 40, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

42. The method according to claim 39, wherein the second fuel and/or solvent further comprises at least one quantitative marker (C) having a predetermined concentration range; the method further comprising: testing the fuel for the presence of marker (C), wherein the presence of marker (C) in the fuel is indicative that the fuel is altered.

43. The method according to any one of claims 39 to 42, wherein the method is of monitoring, testing and/or detecting alteration of a first fuel with a second fuel and/or solvent, the first fuel comprising at least one quantitative marker (C), and the second fuel and/or solvent comprising: (i) at least one quantitative marker (C), (ii) at least one marker (S); and (iii) at least one substance (A), wherein the substance (A) is capable of interacting with at least one laundering agent; both markers (C) being the same and at a predetermined concentration range;

the method further comprising:

(I) testing the fuel for the presence of the quantitative marker (C); wherein the presence of the marker (C) in the fuel having a concentration outside the

predetermined concentration range or the absence of a marker (C) in the fuel is indicative that the fuel is altered; or

(II) testing the fuel for the presence of marker (C) within the predetermined concentration range and for the presence of marker (S), wherein the presence of marker (S) in the fuel is indicative that the fuel is altered; or

(III) testing the fuel for the presence of marker (C) within the predetermined concentration range, the absence of marker (S), and the presence of substance (A) is indicative that the fuel is altered.

44. The method according to any one of claims 39 to 43, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

45. The method according to any one of claims 39 to 44, wherein marker (S) is a quantitative or qualitative marker.

46. The method according to any one of claims 42 to 45, wherein marker (S) is a quantitative marker and is different from marker (C).

47. The method according to any one of claims 39 to 46, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s),naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

48. The method according to any one of claims 39 to 47, wherein the detecting of the presence of marker (C), marker (S), and/or optionally substance (A) is by the use of at least one of the following: gas chromatography (GC), gas chromatography mass spectroscopy (GCMS), high performance liquid chromatography (HPLC), X-Ray diffraction, immunoassay, Raman spectroscopy, luminescence, ultra-violet spectroscopy, infra-red spectroscopy, near infra-red spectroscopy or any combination thereof.

49. The method according to any one of claims 39 to 48, wherein the fuel and/or solvent has been treated by at least one laundering agent to remove at least some amount of marker (C), marker (S), or substance (A), or any combination thereof.

50. The method according to any one of claims 42 to 49, wherein marker (S), marker (C) and/or optionally substance (A), are capable of being partially or completely removed from the fuel and/or solvent by at least one laundering agent.

51. The method according to any one of claims 42 to 50, wherein a treatment to remove marker (S) results in the partial or complete removal of marker (C) from the fuel and/or solvent.

52. The method according to any one of claims 39 to 51, wherein the fuel and/or solvent has been treated with a laundering agent selected from the group consisting of: clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material, adsorbent material and a mixture thereof.

53. A method of monitoring, testing and/or detecting alteration of a fuel, the fuel comprising: (i) at least one marker (S); and (ii) at least one substance (A), wherein substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent;
the method comprising:
(I) testing the fuel for the presence of marker (S), wherein the absence of marker (S) in the fuel is indicative that the fuel is altered; or
(II) testing the fuel for the presence of substance (A), wherein substance (A) is capable of being detected, the absence of substance (A) is indicative that the fuel is altered.

54. The method according to claim 53, wherein substance (A) is capable of interacting with at least clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

55. The method according to claim 53 or claim 54, wherein substance (A) is capable of being absorbed, adsorbed and/or partially or completely removed by interaction with at least one laundering agent.

56. The method according to any one of claims 53 to 55, wherein marker (S) is a quantitative marker having a predetermined concentration range; the method further comprising: testing the fuel for the presence of marker (S), wherein the

presence of marker (S) in the fuel having a concentration outside the predetermined concentration range is indicative that the fuel is altered.

57. The method according to any one of claims 53 to 56, wherein the fuel further comprises at least one quantitative marker (C) having a predetermined concentration range and is different from marker (S); the method further comprising: testing the fuel for the presence of marker (C) in the fuel, wherein the presence of marker (C) in the fuel having a concentration outside the predetermined concentration range is indicative that the fuel is altered.

58. The method according to any one of claims 53 to 57, wherein substance (A) is selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals, paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

59. The method according to any one of claims 53 to 58, wherein marker (S) is a quantitative or qualitative marker.

60. The method according to any one of claims 53 to 59, wherein marker (S) is a selected from the group consisting of: anthraquinone, anthraquinone dye(s), diazo dye(s), furfural, furfural derivative(s), thiobenzotriazoles, benztriazole chemicals,

paraquat, diquat, quinizarin, quinizarin derivative(s), diphenylamine, radioactive material(s), oil-soluble phenylazoaniline dye, 2,6-dicyano-2'-sulfonamido-4'-amino-azo-benzene(s), fluorene copolymer(s), rhodamine, derivatives of rhodamine, analogues of rhodamine, alkylated isodibenzanthrone, alkylated isodibenzanthrone derivative(s), cyanobenzene, 1-(4-morpholino)-3-(alpha naphthylamino)-propane, squaraines phthalocyanine(s), naphthalocyanine, CI Solvent Red, CI Solvent Red 2, CI Solvent Red 4, CI Solvent Red 68, CI Solvent Red 161, CI Solvent Red 164, CI Solvent Red 175, CI Solvent Red 208, CI Solvent Red 165, CI Solvent Blue, CI Solvent Blue 4, CI Solvent Blue 79, CI Solvent Blue 98, CI Solvent Blue 99, CI Solvent Blue 129, CI Solvent Orange 98, CI Solvent Yellow, CI Solvent Yellow 3, CI Solvent Yellow 4, CI Solvent Yellow 124, CI Solvent Yellow 143, CI Solvent Yellow 161, CI Solvent Black, CI Solvent Black 2, CI Solvent Black 7, CI Solvent Black 48, CI Solvent Brown 52, CI Solvent Green and any derivative, analogue or mixture thereof.

61. The method according to any one of claims 57 to 60, wherein the detecting of the presence of marker (C), marker (S), and/or optionally substance (A) is by the use of at least one of the following: gas chromatography (GC), gas chromatography mass spectroscopy (GCMS), high performance liquid chromatography (HPLC), X-Ray diffraction, immunoassay, Raman spectroscopy, luminescence, ultra-violet spectroscopy, infra-red spectroscopy, near infra-red spectroscopy or any combination thereof.

62. The method according to any one of claims 57 to 61, wherein the fuel has been treated by at least one laundering agent to remove at least some amount of marker (C), marker (S), or substance (A), or any combination thereof.

63. The method according to any one of claims 57 to 62, wherein marker (S), marker (C) and/or optionally substance (A), are capable of being partially or completely removed from the fuel by at least one laundering agent

64. The method according to any one of claims 57 to 63, wherein a treatment to remove marker (S) results in the partial or complete removal of marker (C) from the fuel.

65. The method according to any one of claims 53 to 64, wherein the fuel has been treated with a laundering agent selected from the group consisting of: clay, carbon, active carbon, charcoal, active charcoal, paper filter, micropore filter, straw, silica, silica gel, molecular sieve, absorbent material and/or adsorbent material or a mixture thereof.

66. The method according to any one of claims 53 to 65, wherein the fuel is altered with at least a second or further fuel, a solvent, petrochemical or a mixture thereof.

67. An apparatus for monitoring, testing and/or detecting alteration of at least one fuel, the fuel and/or solvent comprising: (i) at least one marker (S); and (ii) at least one substance (A), wherein the substance (A) is capable of interacting with at least one laundering agent to protect and/or prevent marker (S) from being absorbed, adsorbed, or partially or completely removed by the laundering agent; the apparatus comprising at least one means for detecting the presence and/or quantity of at least maker (S) and/or substance (A).

68. The apparatus according to claim 67, wherein the fuel and/or solvent further comprises at least one quantitative marker (C).

69. The apparatus according to claim 67 or claim 68, wherein the detecting of the presence and/or quantity of marker (S), substance (A) and/or marker (C) is by the use of at least one of the following means: gas chromatography (GC), gas chromatography mass spectroscopy (GCMS), high performance liquid chromatography (HPLC), X-Ray diffraction, immunoassay, Raman spectroscopy, luminescence, ultra-violet spectroscopy, infra-red spectroscopy, near infra-red spectroscopy or any combination thereof.