

- detecting the presence of the separated nitrate, perchlorate, azide and chlorate anions.

12. The method of claim 11, comprising locating a cartridge comprising the separation channel into a position so as to allow the sample processing sequence to be conducted, prior to conducting the sample processing sequence.

13. The method of claim 11, comprising locating a cartridge comprising the separation channel and a background electrolyte reservoir into a position so as to allow the sample processing sequence to be conducted, prior to conducting the sample processing sequence.

14. The method of claim 12 or claim 13, comprising performing multiple sample processing sequences prior to replacing the cartridge with a replacement cartridge after performing multiple sample processing sequences.

15. The method of claim 14, comprising replacing the cartridge with a replacement cartridge after performing not less than 1000 sample processing sequences with the replaced cartridge.

16. The method of any one of claims 11 to 15, wherein the cationic polymer forming the cationic polymer layer is hexadimethrine bromide, the anionic polymer forming the anionic polymer layer is polystyrene sulfonate.

17. The method of any one of claims 11 to 16, wherein the concentration of polyethyleneimine in the background electrolyte is between about 0.03 and 0.08% by weight.

18. Use of a separation capillary comprising an inner coating of three or more alternating layers of a hexadimethrine polymer and polystyrene sulfonate or a copolymer, salt or derivative thereof, wherein the first layer and the final layer are hexadimethrine polymer layers, for the separation of nitrate, perchlorate, azide and chlorate anions in an explosive residue screening device.