CLAIMS

1. A cation exchange composition comprising a zirconium silicate of formula (I):

$$A_pM_xZr_{1-x}Si_nGe_yO_m \quad (I)$$

where

A is a potassium ion, sodium ion, rubidium ion, cesium ion, calcium ion, magnesium ion, hydronium ion or mixtures thereof,

M is at least one framework metal, wherein the framework metal is hafnium (4+), tin (4+), niobium (5+), titanium (4+), cerium (4+), germanium (4+), praseodymium (4+), terbium (4+) or mixtures thereof,

"p" has a value from about 1 to about 20,

"x" has a value from 0 to less than 1,

"n" has a value from about 0 to about 12,

"y" has a value from 0 to about 12,

"m" has a value from about 3 to about 36 and $1 \leq n + y \leq 12$,

wherein the zirconium silicate is predominately ZS-9 and exhibits a lead content that ranges from ranges from 0.1 to below 0.6 ppm, and has a potassium loading capacity between 2.7 and 3.7 mEq/g.

2. The composition of claim 1, wherein the lead content ranges from 0.3 to 0.45 ppm.

3. The composition of claim 1, wherein the composition comprises less than 7% particles having a diameter less than 3 microns.

4. The composition of claim 3, wherein less than 0.5% of the particles in the composition have a diameter less than 1 microns.

5. The composition of claim 1, wherein the composition comprises less than 7% particles having a diameter less than 3 microns, and the sodium content is below 12%.

6. The composition of claim 1, wherein the composition comprises less than 7% particles having a diameter less than 3 microns, and the sodium content is 9% or less.

7. The composition of claim 1, wherein the pH of the composition ranges from 7 to 9.