RH008 Methodology

1.06 g of 70 – 100 mesh dry glass beads

3.50 wt% NaCl aqueous solution

Cylindrical glass bead pack dimension:

21.36 mm in diameter

1.52 mm in thickness

🡪 bulk volume of glass bead pack is: 544.7 mm3 = 0.5447 cm3

Bulk density = 1.06 g / 0.5447 cm3 = 1.95 g/cm3

Assuming the density of glass beads is: 2.203 g/cm3

The porosity is: 0.1167 🡪 this number is too small

But, assuming a porosity of 0.35, which was previously determined experimentally, I should expect a bulk porosity of 1.432 g/cm3

But, assuming a porosity of 0.35 and using 1.06 g glass beads, the bulk volume should be 0.740 cm3

Assuming a diameter of 21.36 mm (2.136 cm), the thickness would be 6.488 mm (0.6488 cm).

NUMBERS DO NOT ADD UP!!!

~~Cylindrical glass bead pack dimension:~~

~~17.0 mm in diameter~~

~~1.52 mm in thickness
🡪 bulk volume of glass bead pack is: 345 mm~~~~3~~ ~~= 0.345 cm~~~~3~~

~~Bulk density = 1.06 g / 0.345 cm3 = 3.07 g/cm3~~