

Constant Center Differential Gravity Apparatus Using GEOLIQUIDS Chemical Based Products

The Constant Center Differential Gravity Tube Apparatus is used for very rapid routine repetitive mineral density determinations. Oil Well Loggers do this in their Shale density determinations on the constant look out for shale porosity and open determinations. The method and apparatus is applicable to many other routine density determinations.

A Differential Gravity tube is set up in our apparatus according to the method described in our Bulletin No. 40. With this apparatus, the user may keep his working gravity area in the same place relative to constant scale markings outside the tube. In this manner any porous shale or other off density mineral under routine examination is immediately spotted. The CCDGTA may be used with any non-aqueous heavy liquid shown on our price list plus our BENZYL BENZOATE, Sp. G. 1.120 as the Light Liquid. Oil Well Loggers use BROMOFORM Sp. G. 2.85 as the best all around heavy liquid for their work.



the burette and add BROMOFORM thru the bulb until it is up to the 25 ml. mark.

Then add BENZYL BENZOATE thru the top of the burette until the burette is full. Now lower the leveling bulb so that the liquid, liquid interface is opposite the 50 ml. mark and add more BENZYL BENZOATE to the zero mark or above into the burette. Generate your differential gravity zone within the burette according to Bulletin No. 40. After a proper gradient is established, put in your 11 bead density set. Put in several Shales (or minerals) of known porosity or density and check their density from the tube. As you get to working with your Shales (or minerals) you will get to know the best minimum and maximum densities for your own work and mark lines on the glazed paper attached to the burette according to your own needs. Green and Red limiting marks at either end of the areas are good reminders in routine work.

Each day or any other convenient time, the glass standard at 2.48 can be lined up at the 50 ml. mark and the locations of the High and Low Shale samples may be noted if they have changed appreciably from your previous settings. When the tube gets very many Shale (or mineral) samples in it, they may be flushed out through the top of the burette by tilting it over a beaker or can and raising the BROMOFORM leveler to flush the samples out. Replace the burette and leveling bulb on the stand, add BENZYL BENZOATE into the top of the burette as before and generate a new differential gravity tube. Recover your standards and marker Shales (or minerals) and put them back into the new tube. Each tube generation lasts about a month in routine work.

General Concept:

Assemble the apparatus according to the picture. Set leveling bulb, shown at the right, opposite the 25 ml. mark on



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