EXPERIMENT Nº 08

EXPERIMENT USING THE TIDE SIMULATOR IN LABORATORY

OBJECTIVE:

To observe whether seawater, when placed within a container located away from the sea, suffers the 'tide phenomenon'

DESCRIPTION OF THE INSTRUMENT USED IN THE EXPERIMENT:

To the equipment which simulates tides, was given the name of "Experimental Fluxometric Hydrogravimeter".

A glass container with capacity for 20 litters was filled with saltwater, which was in turn collected from the sea, 10 km from the Nova Viçosa beach - Bahia (Brazil).

The reading of the level variations was performed via a burette graded from 0,0 to 25 ml, which was installed in the bottleneck of the glass container by using a cork made of rubber. Its dimensions were: a radius of 5 mm, and an approximate height of 500 mm

The container was involved in cork and tin foil in order to avoid thermal influences from the environment, when in the presence of observers.

EXPERIMENT DESCRIPTION:

After a few days had transpired, there was a deposition of a layer of microorganisms in the bottom of the container, where it came to "rest".

The water was then filtered and its movements were monitored by use of the graded burette.

Previously, we had already compared our equipment's operation with the sea itself while we were at Nova Viçosa beach - BA, and we came to the conclusion that it was perfectly possible to simulate the tides, that is, it was possible to obtain the same effects when away from the sea. So, we took the glass container to Campinas - SP (Brazil).

MONITORED FACTORS:

* - Atmospheric pressure; (***mmHg***)

* - External Environment Temperature; (EET)

* - Internal Average Temperature of the liquid mass - A + B + C / 3; (IAT)

Where, (A) is the inferior temperature, (B) is the central temperature and (C) is the Superior Temperature; (A< B < C)

* - Internal Environment Temperature of the chamber where the container was located; (IET)

PROCEDURES AND INSTRUMENTS

Periodic measures - of the following factors (measures were performed both manually and automatically):

- Temperature (professional digital thermocouple).
- Environment air pressure (aneroid barometer).
- Electromagnetism (field bobbin).
- Weight (load cell).
- Electric Induction (submersed electrolytes).
- Ion counter (calculated).
- Monitoring of the surface meniscus. [1]
- The air's relative humidity (alcohol hygrometer).
- Date and Time (digital watch - Brasília standard time).

> [1] An automatic meniscus shape registering device is still to be implemented, that is because it would incur in great expenses. The readings were performed and registered within notebooks, manually.

Two more similar tanks were prepared; one of them contained only distilled water, while the other had 7% chloride in its composition, we therefore obtained 3 types of solution:

a) Cationic
b) Neutral and polar, neutral and apolar.
c) Anionic

GENERAL REPORT (first year)

The readings of the 'Experimental Hydrogravimeter' were performed once every 30 minutes, for the period of a year. Initially, it was done by us, but later, it was done by a dedicated computer.

Observations which took place in the period between 08/08/85 and 08/08/86

Throughout the aforementioned period, three (3) types of 'meniscus' (formed by the seawater contained therein) were documented, and they would periodically take turns when being formed. The menisci's formation was independent from the environmental pressure and from the gravitational "attraction", that is because there were moments when the 'meniscus' in the 'cationic' solution was 'concave', the one in the 'anionic' solution was convex and the neutral solution's meniscus was 'straight'.

(+) (0) (-)

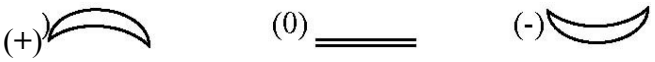
Three basic types of 'menisci' were presented.

We were also able to observe that, when the Moon is aligned with another, the seawater levels (h) would duplicate or triplicate in accordance with the number of celestial bodies involved.

A SUMMARY OF THE FIRST YEAR OF OBSERVATION OF THE HYDRO GRAVIMETER

1) The level of the solution would increase and decrease two times a day.

2) The meniscus which was formed in the solution would alter its shape from time to time, sometimes it would be in a horizontal position, or it would be facing downwards and at other times it would be facing upwards.



3) The internal temperature of the solution would always greater than that of the environment, only rarely was it equaled or surpassed.

4) We were able to observe that, at times the temperature would increase and so would the level of the solution, however, there were other times when the temperature would decrease whereas the level would increase and vice versa.

All of the measures were taken with the use of a 'digital thermocouple', which possesses an accuracy of a tenth of a degree centigrade. The temperature was taken from the bottom, the middle and the bottleneck of the container and all notes were recorded by using the average temperature.

5) In order for us to make comparisons against tap water, that is, we filled another container with the same volume as the first (20 liters of water). This time, however, the container was made of plastic, and we were able to observe that the level changes were very inferior to those happening in the glass container. So, we acquired another container made of the same material, this one was kindly donated to us by a lady, whose husband had sold us the first one for Cz$100, 00.

Both containers were calibrated at environment temperature, about 20°C, during the afternoon, both containing the same level of water.

6) We were able to observe that, at times, the level of maritime solution was superior to that of tap water. But, after 4 to 5 days, the situation would revert, and the tap water solution would remain for 4 or five days with its level superior to the maritime solution, even though the levels possessed the same behavior from one interval to the next, that is, on the level of one solution would increase, so would that of the other, and when the level in one solution decreased, so would the other's.

When the day would come for them to reverse their procedures, the level of both solutions would present a complete discrepancy, that is, they would mismatch, but they would return to normal after a while, and continued to present identical movements, that is, when the level in one solution increased, so would the other's level, only that the solution with the highest level, would present itself as the one with the lowest and vice versa.

7) We were also able to observe that the 'outlines' of the 'menisci' within the solutions would take turns in the following manner: (consider 'concave' as (+), 'convex' as (-) and 'neutral' as (0)

The seventh combination (7^a) would only happen during 'Full' and 'New' Moons, as well as in significant planetary conjunctions / oppositions such as with Mars and Jupiter.

Table of the simultaneous combinations of the 'menisci'.

Simultaneous Combinations	***H2O+NaCl*** (seawater)	***H2O+Cl*** (tap water)
1ª	(-)	(-)
2ª	(-)	(0)
3ª	(0)	(0)
4ª	(0)	(-)
5ª	(+)	(-)
6ª	(+)	(0)
7ª	(+)	(+)

8) Another factor observed was the effect of the planetary alignments; For example when the conjunction Venus, Earth, Moon and Mars happened, the level increased substantially and the solution overflowed. As we didn't know the volume which had leaked, we performed a new adjustment in the device. On that day, at 8 pm, the news was informing on a great earthquake in Mexico. 24 hours later there was a new overflow and, once again, there was an earthquake in Mexico. In the day of the great volcanic eruption in Colombia, there almost was another overflow in the device.

9) We have installed a bi-iodine lamp within the container, and we wrapped on tin foil the container with the seawater. During the "New Moon" and the rainy weather of August 1986, we have observed that, initially, the 'meniscus' was in the following condition: (-) at 01h20min of 08/18/86. At 1h24min, the meniscus was (0). It kept this configuration up until 01h54min.

The level ranged from **11,4** to **14,5ml**, and the temperature varied from **21,8°*C*** to **24,8°*C***.

After the lamp was turned off, the meniscus returned to its original condition (-), while the temperature dropped slowly. At 05h24min the external temperature was 22°C, and so was the internal temperature - the level was at 13,6ml and its configuration was (-).

OBS.:
The fact that the 'meniscus' remained straight (neutral = 0) during the artificial heating of the solution demonstrates that the factor responsible for the meniscus (+) is a 'spatial or gravitational telluric vector'.

RETURN TO READING GUIDE [**Seventh Step**].

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