the same for any series lying in the same spectral range, it will have no bearing on the controversy regarding the universal constancy of the Rydberg constant. For series extending far into the ultra-violet, this change of value may have some effect.

On Bohr's theory of the hydrogen atom, N_0 is a known function of the charge and mass of the electron, and of Planck's constant h. It is therefore important, on theoretical grounds, to know its value as accurately as possible. The author therefore wishes to emphasize that Curtis's own determination of the hydrogen lines, when handled correctly, leads to a value of this constant of 109,678.705, while the best previous determinations, when converted to the I.A. system, yield an almost identical value. It is hoped that future investigators will use 109,678.705 rather than Curtis's published value of 109,679.22.

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MOISTURE RATIO

Much confusion has existed for years in interpreting the results obtained by various investigators on the determination of moisture in soils, rocks, etc. Noyes[1] has lately endeavored to bring about a more uniform method of reporting the moisture content of soils.

According to Bulletin No. 107, Bureau of Chemistry "Official Methods of Analysis," compiled by the association of Official Agricultural Chemists, the results of soil analysis are calculated as per cent. of the soil dried to constant weight in the water oven. It is rather unfortunate that the official method of reporting results has not been uniformly followed.

One of the phrases suggested by Noyes, "Ratio of water to 100 parts of dry soil," suggested to me the term moisture ratio. Such a term as "moisture ratio" on account of its brevity can be considered an advantage when preparing tables, charts, etc.; and if interpreted as defined below will not cause such confusion as the terms which have been used in the past.

The "moisture ratio" would mean the grams of water to 100 parts of the soil dried to constant weight at a temperature of 100–110° C. The terms "oven dry" or "absolutely dry" are being interpreted by some as meaning the drying of samples to 100° C., while others dry at higher temperatures and use the same terms.

The temperature at which samples are dried is seldom given in papers and as it is possible to control most drying ovens within a range of 10° C., the temperature of drying soil samples when using the term "moisture ratio" would be from 100–110° C.

I have lately made some tests on various electric drying ovens and found a wide range of temperature in some while others showed very little range on various shelves in the oven. The temperatures found on the various shelves in three of those tested are given in the table following:

TEMPERATURE RANGE IN VARIOUS ELECTRIC OVENS

Oven Number	Top Shelf	Middle Shelf	Bottom Shelf
1	96° C.	117° C.	147° C.
2	94	99	105
3	100	96	98

Oven No. 1 has the heating unit near the bottom of the oven and by tests made when empty as well as when full to capacity with soil samples showed a range in temperature of 51° C.

Oven No. 2 is similar to No. 1 except that an extra heavy piece of asbestos was placed above the heating unit leaving an air space of about ½ inch. Tests were made as with No. 1 and showed that the wide range of 51° C. was reduced to 11° C.

Oven No. 3 is a different make of oven, operating on a different principle from No. 1 or No. 2, but also had the heating unit near the bottom of the oven. From a large number of tests made under different conditions this oven never showed a range greater than 5° C. and most of the time it was only 1 or 2 degrees.

[1] "Reporting Moisture Results," H. A. Noyes, Science, N S., Vol. XLVII, No. 1212, p. 293.

The temperature at which soil samples are dried should be more carefully controlled and if the term "moisture ratio" were adopted we should have a more uniform basis of reporting results as well as of various analyses made by different investigators.

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THE IOWA ACADEMY OF SCIENCE. II

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The oils in cherry pits: NICHOLAS KNIGHT. An unquestioned source of oil in Germany in connection with the present war is cherry pits. The fruit is produced there in great profusion. We extracted the oils from 50 grams of the kernels of dried cherry pits and obtained 37.6 per cent. There were two varieties of oil. One, of which there was about 90 per cent., resembled almond oil, and the remainder seemed closely related to peanut oil.

Some problems of water supply for troops: JACK J. HINMAN, JR. A brief survey of methods which have been adopted at various times in the past for purifying water to be supplied to troops in the field.

The subject of chemical germicides is made the most important topic and particular attention is given to the use of chlorine and allied compounds. An extensive bibliography is appended.

The composition and digestibility of sudan grass hay: W. G. GAESSLER AND A. C. MCCANDLISH.

The occurrence and possible toxicity of molds in corn silage: ALVIN R. LAMB. The examination of a number of samples of corn silage, which contained mold which had grown in the interior of the silo, out of contact with air, showed the presence of two species, a red mold, *Monascus purpureus* Went, and a green mold, *Penicilium roqueforti* Thom. Aqueous extracts of the mycelium of these molds had no toxic effect on rabbits when injected intravenously. Large amounts of mold were given rabbits *per os* with no noticeable effect.

(a) Deterioration of concrete silos due to the corrosive influence of silage acids. (b) Some observations on Kendall's method for the determination of iodine in thyroid preparations: S. B. KUZIRIAN.

Some improved laboratory methods: W. S. HENDRIXSON.