Nitrogen distillated device

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- In our laboratory, we buy (in the middle of July) a new device for nitrogen distillated, type Gerhardt – Vapodest 450, cod 12-0550, that replace another equipment – Vopodest 30 (we had it since 2005)
- When we start working with it, we have the following problems: the results of mineralized blanks (for soils samples) under the same conditions, distilling and then titration with sulfuric acid 0.01n (and worked the same operator) give different values
- In the middle of august has came the specialist who put the device in operation, again. He tried several solutions: changed the parameters of mineralization, used NH_4Cl and urea for verification. Of course, for these two substances gave correct results, but for blanks, not
- For exemple, the values was:

No	ml titrated	No	ml titrated
M1	1.1	M1	**2.9**
M2	0.9	M2	1.6
M3	1.2	M3	1.0
M4	1.7	M4	1.8
M5	1.3	M5	1.1
M6	1.1	M6	1.2
M7	1.2	M7	1.2
M8	1.2	M8	1.4
M9	1.3	M9	1.1
M10	1.3	M10	1.3
M11	0.9	M11	1.2
M12	**2.8**	M12	1.2
M13	**2.6**	M13	1.2
M14	1.2	M14	**2.4**
M15	**3.5**	M15	1.8
RM 1	2.2	M16	2.0
RM 2	2.2	M17	**2.6**
RM 3	2.2	M18	**2.8**
RM 4	2.3	M19	**2.1**
RM 5	2.3	M20	**3.3**
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- The new device

- The old device

•Mineralization or digestion block (Gerhardt too)

- For digestion, we use the following method: 0.2g the air-dried soil sample in the digestion tube (50ml) + 10ml H_2SO_4conc + 1 Kjeltab ($5.0gK_2SO_4$+$0.15gCuSO_4x5H_2O$+$0.15gTiO_2$) and the temperature is 400°C for 45 minutes
- Than, we distillated, after a program of apparatus and we catch in 20 ml H_3BO_3, and that we titrated, in the presence of mixted indicator, with H_2SO_4 0.01n
- With old device, we hadn't this kind of problems
- Another aspect: when we analyzed leaves or litterfall, do not have the same problems with blanks

- Mention that determinations of nitrogen, in leaves and litterfall, are not the same problems. The blanks always comes out well (titration is made with H_2SO_4 0.1n)
- We don’t know what is happening and which is the explanation?

Thank you for attention