Introduction to bromatology (practices)	Analysis Protocols	Ref: 3.1

PREPARATION OF REACTIVE SOLUTIONS

PURPOSE AND RATIONALE

To spek to establish a general procedure for preparation reactive solutions.

MATERIAL

Magnetic Stirrers.
Analytical Balance.
Top-loading balance.
Desiccator.
Funnels
Drying stove.
Filter paper, fast.
Polyethylene bottles (of 1 liter) with screw cap.
Volumetric flasks of different volumes.
Filter paper.
Weighing bottle.
Pipettes of different volumes.
Plates heaters.
Rods.
Beakers of various volumes.

REAGENTS

(In addition to the practice specific)
Concentrated hydrochloric acid AG.
Distilled water.
Concentrated ammonia AG.

METHODOLOGY

The appropriate methodology varies depending on the characteristics of each reactive solution to prepare.

CALCULATIONS

Based on the criterion of having data on the concentration of the solution that we want to prepare in grams / liter. To switch from normal to grams / liter applying the expression:

$$c = N \cdot pe$$

where "**c**" is the concentration in grams/liter, "**N**" is the normality and "**pe**" is the equivalent weight. The amount to be weighed to prepare a volume "**v**" of concentration "**c**" is:

$$m = c \cdot v$$

If the amount is too small, we can weigh a higher amount for subsequent dissolution. To prepare a diluted solution from another more concentrated, the volume of take concentrated solution is:

$$V_c = \frac{V_d \cdot C_d}{C_c}$$

where "**Vc**" is the amount to be taken in concentrated solution, "**Vd**" the volume of diluted solution to be prepared, "***Cd***" is the concentration (in grams/liter, molarity or normality) and "***Cc***" is the concentration of concentrated solution (in grams/liter, molarity or normality).

OBSERVATIONS

Always follow the precautions of use inherent in each product.

Cuestionnaire 3.1.- Preparation of reactive solutions

1.- .- Define the following concepts:
a) reactive AG
b) titrated solution
c) class A volumetric material
d) class B volumetric material
e) volume content
f) volume for spill
g) pure reagent
h) extemporaneous solution

2.- Precautions for preparation and preservation of reagents of this characteristics:
a) highly corrosive solutions of reagents
b) reducing reagent solutions
c) solutions of reactive oxidants
d) very unstable solutions