



## Balances: general informations

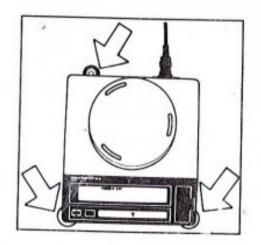
16 décembre 2014 UMR S 1066 1





### Good practices of weighing balances

- Balance settings : range, minimum weight, precision
- Environmental factors: table of weighing, airflow, temperature, hygrometry, electrostaticity
  minimize their influence
- Instructions for use and check in application
- Switch on the balance if sleep mode (no preheating)
- Check the level (bubble)
  - 5-1 Mise à niveau de la balance
  - Vérifier que le niveau de la bulle, situé en arrière côté gauche de la balance, est centré (voir figure ci-dessous). Si besoin, tourner les 2 pieds de réglage à l'avant de la balance jusqu'à ce que la bulle d'air soit centrée par rapport à l'anneau du niveau à bulle.



Extract of the instruction « CONS\_Utilisation de la balance H160 02 »





### Good practices of weighing balances

- Make sure of the cleanliness of the tray > use brush
- Make sure that the internal calibration was well made (ENR form)
- Make sure that the sample is at ambiant temperature
- Centring the weighing sample
- Close doors
- Tare > readability (0,1-0,01mg), do not tare container to minimize the error in weighing < 10mg</li>
- Perform weighing
- Wait for a few seconds the stabilization
- Print or write your result
- Remove your container then put the balance to zero
- Clean the scale and bench





# Balances Technical Informations (reserve laboratory 4282)

Scales	Range	Fine	Readability	Minimum weight	EMT
models		range			
XP105DR	120g	31g	< 31g: 0.01mg	1mg	weight 1mg => +/-0.03mg
		_	->31g:0.1mg		weight $100g => +/-0.6mg$
AG204DR	210g	81g	< 81g : 0.1mg -	10mg	weight 10mg => +/-0.2mg
			>81g:1mg		weight $100g \Rightarrow +/-1mg$
H160	161g	-	1mg all over	1g	weight 1g => +/-5mg
			the range		weight 100g => +/-10mg

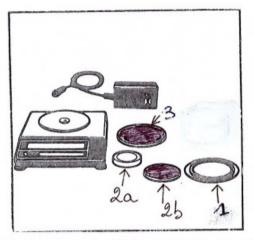
16 décembre 2014 UMR\_S 646 4





### A few rules to follow when cleaning a balance

- During "recurrent tasks" and after weighing
- Place a paper damped with water and another paper with 70% ethanol on the various elements of the balance, if necessary let dry before weighing
  - Never spill liquid on the tray of a balance H160 example:



- 1- Anneau de protection
- 2- Support de plateau (2a et 2b)
- 3- Plateau de balance

Extract of the instruction « CONS\_Utilisation de la balance H160\_02 »

L'ordre de montage des différents éléments est le suivant :

- Placer l'anneau de protection (n°1 sur le schéma)
- Placer le support 2a <u>(rebords vers le haut)</u> et adapter sur celui-ci l'élément 2b en s'assurant que les rebords soient à l'extérieur
- Puis placer le plateau de balance (n°3 sur le schéma)





### Practical cases

#### **Unstable weighing:**

- increase (hygroscopic product > fast reading)
- decrease (product too hot or volatile > freeze drying or desiccation)
- oscillation (variation of the surrounding environment: vibration, temperature)