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Hands on basic instructions

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- Identify important parameters
- •Recognize behavior of different particles
- •It's hard to be an inspector even for half a day















- Test set contains 28 vials
- Blanks and rejects
- Every Inspector has to inspect all 28 vials in each experiment
- Patiently wait until the class is ready to move on to the next experiment





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Documentation

PARTICLE INSPECTION DATA SHEET #1: Normal Inspection

Inspector:			Test Set ID:	
Inspection Station:	Illumination Intensity:		lux	
FULL Illumination Intensity	WITH Agitation	5 Se	c/Background	



- Write down your name on the data sheet
- Write down 3 digit number of the vial and your observation
- Write down Test set number
- Each inspector has to write down the inspection results for the entire set of 28 vials
- Write clearly











Setup of the instrument









Switch on both lamps

Measure light intensity. Mark a position at ~ 3000 Lux

Mark a position at ~ 3000 Lux

















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- Remove cover from sensor
- Select measurement range
 - Just listen to the metronome while inspecting to get the right timing









- Pick up vial holding at approximately a 30-degree angle and bring to the black and then the white background to inspect for any heavy particles on the lower portion of the vial bottom.
- Gently swirl to inspect for any fine sediment on the bottom of the vial in both backgrounds.
- Fully invert to fully 'wash' the stopper area, return upright, and swirl the vial in front of the black background looking for particulate matter.
- Fully invert, return upright, and swirl in front of the white background looking for particulate matter.
- Record results on data sheet.



Training

- Two vials of each set (marked with a dot) contain easy to observe particles
- Make yourself familiar with swirling and inverting for a couple of minutes with these vials to practice the particle detection
- Try swirling and inverting











Exp. 1: Standard condition









Inspect at marked position

Inspection time 5s black, 5 s white background Swirl or invert







Exp.2: Elevated inspection time









Inspect at marked position

Inspection time 10s black, 10s white background Swirl or invert







Exp.3: Reduced Light intensity - setup









Switch off one lamp

Measure light intensity

Mark a position at ~ 1500 Lux













Inspect at marked position

Inspection time 5s black, 5 s white background Swirl or invert







Exp.4: No agitation









Inspect at marked position

Inspection time 5s black, 5 s white background No Swirling or inverting



