

HOW TO PERFORM BETA SURVEYS USING THE LOW-RANGE BETA METER	
FUNCTION: To assess levels of beta radiation using the Low-Range Beta Meter.	
DESCRIPTION: Using a beta survey meter, measurements are taken to determine: <ol style="list-style-type: none"> a. beta radiation levels, b. the location of the beta sources in that area. <p>When results are obtained, warning signs should be placed, if necessary.</p>	
STEP	OPERATION
1	Obtain any prepared survey sheets to simplify the recording of survey data. Obtain any existing survey data.
2	The Low-Range Beta Meter (e.g., Eberline RO-2A, 0-500 mGy/h) gives reliable beta and gamma dose rate information. An additional gamma survey instrument is not required.
3	Perform the pre-operational checks on the instrument. Switch the Low Range Beta Meter on <u>before</u> entering any suspected or known radiation areas and take heed of any information displayed on warning signs.
4	Open the beta shield and enter the area. Face the open window on the bottom of the meter in the direction you think the source may exist.
5	Set the function switch to the lowest range giving an on-scale indication and note the reading on the meter. (This reading is the sum of the beta and gamma dose rates.)
6	Close the beta shield and read the dose rate again. This reading indicates the gamma dose rate only. Subtract this second reading (gamma only) from the first reading (gamma and beta) to obtain the beta dose rate.
7	Establish the general fields by taking readings at waist level in the accessible areas with the beta survey meter pointed at any sources.
8	If work is to be done, survey the work location and the access route. Any contact readings should be taken at 1 cm or 1/2" (whichever you use, be consistent).
9	When the survey is finished, warning signs should be placed to properly identify the hazards and Work Control should be notified. Provide any completed survey forms to Health Physics. Make the details of the survey available to all concerned.
PRECAUTIONS:	
<ol style="list-style-type: none"> 1. Do not expose yourself unnecessarily to radiation fields. 2. Levels of beta radiation will increase dramatically when contaminated systems are opened to the atmosphere. 3. The use of protective clothing can greatly decrease your beta exposure. 4. Always bag the beta meter before use in highly contaminated areas. The shielding effect of the plastic is negligible. 	