

Application of Video-BART-READ software and hardware

One of the problems with using the BART testers is that they have to be observed every day for any significant reactions. Video-BART-READ (VBR) version 3.0 is a software program that can use a recommended Cannon digital camera to take pictures on a regular basis. It is recommended that a good interval between images is 15 minutes. To routinely observe the reactions in a BART tester then the more economical laboratory (L) tester should be used. The L testers can be put in rows of six testers in the standard BART RACK and up to four racks can be observed at the same time meaning that 24 testers can be monitored at the same time. For convenience the racked testers should be kept at room temperature and left illuminated continuously using daylight (white) lights. To position the four BART racks a base plate is used in which slots fit the lower set of racks (two) and also the position of the base for the camera. VBR version 3.0 works with the software supplied by Cannon and allows time lapse photography to be taken for the BART testers in the BART RACK (maximum 24). Once the camera is connected through the USB port and the software installed then it is possible to interpret and archive the data and also generate reports in word (rtf) or add the data to spreadsheets.

Setting up the software involves using a computer that is Windows 95 or better including Vista. This software controls the camera by being compatible with the controls built in to the camera by Cannon. Once started it is possible to start lab BART testing at different times and also start new tests in slots on the BART RACK once the old tester run has been terminated in that slot. Viewing the reactions can be helped by the use of the zoom and drag features in the software. Zoom allows the observer to move into a particular group or an individual tester and drag allows you to move over the whole field of (potentially 24) BART testers. Positive detections are achieved by clicking on the reaction observed (each BART tester type has different reactions and they are all listed appropriately in a drop down window). When assured that the reaction is correct then clicking a confirmation button causes the time lapse to be calculated along with the predicted active cells per ml (pac/ml) if this is the first reaction observed in the tester. Subsequent reactions are archived and presented in the interpretation but do not play a role in predicting the population.

VIDEO-BART-READ is designed for use with the SRB-, IRB-, SLYM, HAB- and DN-BART laboratory testers only. When running this system make sure that there will be no shadows moving periodically across the camera's field of view, that the racks are firmly positioned using the BART-RACK base plate and that the camera is also mounted on its special rack. Ensure that the apparatus is away from direct sunlight and the room ventilation system provides an even temperature in the range of $22 \pm 2^\circ\text{C}$. For more information then go to the site "VIDEO-BART-READ" at www.dbi.ca.