1 **Objective:**
This Standard Operation Procedure states how Van de Graaff Accelerator should be started up and shutting down in a proper manner.

2 **Responsibilities:**
   2.1 **Director / HOD / PI**
   The Director/HOD/PI has overall responsibility for ensuring a system is established for the safe use of the accelerator.

   2.2 **Designated Person**
   There shall be a designated person to oversee the correct operation and maintenance of the accelerator.
   a. This person shall periodically inspect the accelerator to ensure its operational performance.
   b. He/She will arrange for the yearly safety certification by a competent person and keep a copy of the certification report for verification purposes.
   c. He/she will make necessary arrangements for repair works of the accelerator.
   d. He/she will report to the Director/HOD/PI unsafe practices by accelerator users.

2.3 **Staff/ Research personnel**
   a. Accelerator users shall attend appropriate training on the safe use of the accelerator.
   b. Users shall report any injuries, defects or breakdowns to their supervisor.

3 **Procedures:**

3.1 **Starting up:**
   . Switch ON the Chill Water pump (the control box is mounted on the wall near the door).
   . Make sure nobody is inside the room then slide the lead door and close the wooden door.
   . On the control panel turn the Switch key to **ON** and press the **Drive Motor ON** button.
   . Select GAS 1,2 or 3: usually no.1 is Hydrogen and it needs only 12 turns of the GAS CONTROL from minimum at the anti-clockwise position.
   . At the VAN DE GRAAFF STABILIZER box the Belt charge OFF button will lit to indicate the charge can be switched to ON by pressing the Belt charge ON button.
. Carefully turn up the charge from zero to the desired terminal voltage - the value reads 3200 on GVM Reference and Column current 28 microAmp for 2 Mev.
. The beam will strike after enough gas fills the ion source and be registered on the Beam Current meter.
. Switch to GVM from Manual for a stabilized voltage.
. Switch on the Magnet and set value for the selected beam.

3.2 Shutting Down

. Press BELT CHARGE OFF button.
. Turn charge back to zero and switch to Manual position.
. Press Drive Motor Off button and then turn key to OFF.
. Switch off water chiller pump.

The accelerator can be stopped immediately by turning the switch key to OFF in case of emergency.

4 Records:
a. A copy of the yearly licensing must be kept in a file by the accelerator owner for verification purposes.

5 References:
Manuals kept on the shelves at S7-01-07 near accelerator’s control panels.

6 Appendix:
Nil