SAFETY OPERATING PROCEDURES FOR DENTAL X-RAY EQUIPMENT

1. Dental X-ray equipment must only be operated by individuals who have been trained in the safe use of the equipment and the procedures being performed.
2. Warning signs must be affixed on the outside of the room, on the door that provides access to the equipment. The sign must be clearly legible and visible at a distance of 2 meters to personnel approaching the room door. Warning labels must be affixed to the equipment.
3. The operation of an X-ray tube should be controlled from the control panel located outside the radiography room or behind a protective barrier.
4. All lights, meters, controls must be properly labeled and marked as to its function.
5. Warning light and/or sound must be provided when the X-ray tube is energized.
6. A room must not be used at the same time for more than one radiological investigation. The equipment should be located in a locked room that can be entered only by authorized users. If equipment must be located in unrestricted areas, appropriate barriers should be installed and a key control switch must be installed to prevent unauthorized use.
7. All operators must wear personal dosimeters and keep as far away from the X-ray beam as is practicable at all times. Direct radiation exposure to an individual for training purposes must never be allowed. Radiation exposure report must be kept for at least three years.
8. Lead shielding, such as a lead apron and collar, must be provided for all exposures on patients.
9. No person, other than the patient, is allowed in the x-ray room during any exposure. When there is a need to support children or weak patients, holding devices should be used. If parents, escorts or other personnel are called to assist, they must be provided with protective clothing and be positioned to avoid the primary radiation beam. No one must regularly perform these duties.
10. The dental film should be fixed in position with a holding device, whenever possible, otherwise it should be held by the patient. The dental practitioner or other personnel must not hold the film in place for the patient during the procedure.
11. An X-ray tube housing must not be held by hand during operation.
12. Any defect in X-ray equipment shall be reported immediately to the authority responsible for radiation safety of the particular machine or Radiation Protection Services. Repairs or maintenance work will be normally be carried out by service specialists such as the manufacturer’s agents; when in-house personnel are involved, their competence to control any radiation hazard must be established prior to any repair or maintenance work.
13. Pre-operational Safety Checks (safety devices, personal protective equipment etc.) should be performed periodically to insure their proper operation. Records of inspections, surveys and repairs shall be maintained.
14. X-ray equipment owner or dentist must established a Quality Assurance program which includes quality control procedures for the monitoring and testing of dental X-ray equipment and related components, and administrative methodology to ensure that monitoring, evaluation and corrective actions are properly performed.