TITLE:	**IBC07-Centrifuge Safe Operation**
OVERVIEW:	This policy describes the basic safety techniques that are needed when operating a centrifuge.
APPLIES TO:	All users of the centrifuge whether using a low-speed desktop model or an ultra high-speed floor model instrument.
DEFINITIONS:	
PROCEDURES:	Satisfactory mechanical performance is a prerequisite of microbiological safety in the use of laboratory centrifuges. Periodic inspection, certification, and calibration is required. Centrifuges should be operated according to the manufacturer's instructions. Centrifuges should be placed as such a level that workers can see into the bowl to place rotors and buckets correctly. Centrifuge tubes and specimen containers for use in the centrifuge should be made of thick-walled glass or preferably of plastic and should be inspected for defects before use. 1. Securely cap tubes and specimen containers prior to centrifugation (screw-capped is recommended). 2. Buckets must be paired by weight and, with tubes in place, correctly balanced. 3. Make sure the amount of space between the level of the fluid and the rim of the centrifuge tube follows manufacturer's instructions. -distilled water or alcohol (70%) may be used for balancing -saline or hypochlorite solutions should not be used as they corrode metals. 4. Sealable centrifuge buckets (safety cups) must be used for risk group 3 microorganisms. 5. When using angle-head centrifuge rotors, care must be taken to ensure that the tube is not overloaded to prevent leakage. 6. Inspect the rotors and buckets prior to use for signs of corrosion and hair-line cracks. 7. Buckets, rotors and centrifuge bowls should be decontaminated after each use with a 70% alcohol solution.
RECORD KEEPING:	Centrifuge buckets and rotors should have a record of regular inspection.
OTHER	All centrifuges should have lockable lids that are secured while the

INFORMATION:	rotor is moving. Sealed rotors or safety cups must be used for processing highly concentrated or large volumes of infectious agents and specimens that may contain agents that are spread by airborne transmission, e.g., *M. tuberculosis*. Sealed rotors or safety cups must be opened inside a biosafety cabinet after centrifugation of a biohazardous agent is complete. Centrifuge tubes and cups containing biohazardous material must be both filled and opened in the biosafety cabinet. When opening tubes containing biohazardous materials, wait a few minutes after centrifugation to allow the aerosol present to settle. Centrifuges must have doors that interlock to prevent them from being opened while spinning. For biological spills or breakage within the centrifuge, refer to policy #IBC04, Biological Spill Clean-up.
REFERENCES:	World Health Organization, Laboratory Biosafety Manual, 3rd Edition, Geneva, 2004.
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