



UNC CHARLOTTE

Department of Engineering Technology

# LABORATORY SAFETY ANALYSIS

## OPERATING A SIEVE SHAKER


Location: Smith 131 and Smith 133


Required Training: Mechanical Sieve Shakers are designed and intended for use by properly trained and experienced operators. If you are not familiar with the proper and safe operation of this type of apparatus, do not use until proper training and knowledge have been obtained.

Required Personal

Protective Equipment (PPE): Safety glasses, dusk mask in dusty work conditions, and closed toed shoes

Reference Materials: Manufacturer's safety rules and operating instructions

PHOTOS	TASK	HAZARDS	CONTROLS
	Wear clear safety glasses with side shields and if necessary use a dust mask	Flying debris and dust particles	<ul style="list-style-type: none"> <li>Students are required to provide their own safety glasses.</li> <li>See laboratory instructor or laboratory manager if you do not have safety glasses before proceeding to use equipment.</li> </ul>
	Inspect safety glasses for cracks, scratches or other damage. Ensure the ANSI standard Z87.1 is stamped into the side of glasses. If necessary inspect dust mask or face mask.	Flying debris and dust particles	<ul style="list-style-type: none"> <li>If defects are found report this to your laboratory instructor before using.</li> </ul>
	Put on all necessary PPE	Flying debris and dust particles	<ul style="list-style-type: none"> <li>Always wear safety glasses. Use a dust mask in dusty work conditions.</li> </ul>
	Visually inspect the electrical power cord.	Electrical shock	<ul style="list-style-type: none"> <li>If the electrical cord is damaged or worn the electrical cord should be unplugged and tagged "Out of Service-Do Not Use".</li> <li>This should be reported to the laboratory manager immediately.</li> <li>Electrical cord replacement should only be conducted by a factory authorized technician.</li> </ul>
	Ensure the electrical cord is connected to electrical outlet.	Electrical shock	<ul style="list-style-type: none"> <li>Caution: Always remember to disconnect the electrical power cord before moving shaker.</li> </ul>
	Inspect work area, walk around shaker area looking for debris	Slips, trips & falls	<ul style="list-style-type: none"> <li>Remove any debris that could possible cause a injury. Keep work space around shaker</li> </ul>

	and ensure adequate lighting.		compactor free from old soil and aggregate, oil or grease. <ul style="list-style-type: none"> <li>• Make sure the sieve shakers are located on a level surface, with plenty of clearance for proper operation.</li> </ul>
	Setup of sieve shaker	Pinch points and dropped objects	<ul style="list-style-type: none"> <li>• Devote your individual attention to the work being performed.</li> <li>• Take care in preparing the stack of sieves for testing. Remember to keep fingers from being pinched when stacking sieves.</li> <li>• After stacking sieves in shaker, take care to properly adjust retainer to secure sieves.</li> </ul>
	Turn the shaker on by switching the button to the "ON" position.	Struck by flying debris, pinch Injury	<ul style="list-style-type: none"> <li>• Turn the snitch to "On" position and set to the proper time duration.</li> <li>• Devote your individual attention to the work being performed.</li> <li>• Never leave the shaker unattended while in motion.</li> </ul>
	Turn off the shaker by switching the button to "OFF" position	Struck by flying debris, pinch Injury	<ul style="list-style-type: none"> <li>• Always turn the power off and unplug when testing is complete.</li> <li>• Wait until shaker has stopped moving before removing sieves from the device.</li> <li>• Use care when separating one sieve from another to prevent pinch or cut injury and to minimize test specimen spillage.</li> </ul>
	Clean work area and return all PPE to clean, dry storage area.	Injury	<ul style="list-style-type: none"> <li>• To ensure adequate housekeeping measures to prevent accidents.</li> </ul>

For more information about this LSA, contact the *Department of Engineering Technology* at UNC Charlotte (704) 687-2305  
 Please visit our website at: <http://www.et.uncc.edu>

***The development of Laboratory Safety Analyses is a very effective means of helping reduce incidents, accidents, and injuries in the workplace. It is an excellent tool to use for training purposes and can also be used to investigate "near misses" and accidents.***