

Product Testing Solutions
Artificial Perspiration

Artificial Eccrine Perspiration

The Artificial Eccrine Perspiration we offer is a ready-to-use solution and the closest mimic to true human eccrine sweat. It consists of 19 amino acids, the seven most abundant minerals, and the four most abundant metabolites at a pH of 4.5. All concentrations closely match experimentally determined values for adult human eccrine sweat. Custom formulations are available on request.

Artificial Eccrine Perspiration List of Ingredients			
Metabolites	Uric Acid	Urea	
	Lactic Acid	Ammonia	
Minerals	Sodium	Iron	
	Calcium	Copper	Sulfate
	Magnesium	Potassium	Nitrate
	Zinc	Chloride	
Amino Acids	Glycine	L-Histidine	L-Serine (Largest amount)
	L-Alanine	L-Isoleucine	L-Threonine
	L-Arginine	L-Leucine	L-Tyrosine
	L-Asparagine	L-Lysine	L-Valine
	L-Aspartic acid	L-Methionine	Taurine
	L-Citrulline	L-Ornithine	
	L-Glutamic acid	L-Phenylalanine	

Pickering Laboratories is pleased to offer our Artificial Eccrine Perspiration in a larger format – in addition to the 200 mL and 5 mL quantities, we now offer our stabilized formulation in a 950 mL volume, packaged in a 1 L plastic eluant bottle.

Storage and Handling

The stabilized solution is preserved with a fungicide and bactericide. The non-stabilized product is kept frozen.

Artificial Eccrine Perspiration	
Catalog No.	Description
1700-0022	Artificial Eccrine Perspiration – Not Stabilized, each (200 mL/bottle)
1700-0020	Artificial Eccrine Perspiration – Stabilized, each (200 mL/bottle)
1700-0023	Artificial Eccrine Perspiration – Custom pH, Not Stabilized, each (200 mL /bottle)
1700-0021	Artificial Eccrine Perspiration – Custom pH, Stabilized, each (200 mL/bottle)
1700-0024	Artificial Eccrine Perspiration – Stabilized, each (5 mL/bottle)
1700-0531	Artificial Eccrine Perspiration – Stabilized, each (950 mL/bottle)

Pickering Laboratories created our Artificial Eccrine Perspiration to universally standardize across all industries; it is the only formula that can satisfy all test challenges. Although it is the most complete formulation available, we also offer industry-specific artificial perspiration formulations.

Artificial Sebum

Sebum is an oily secretion produced by sebaceous glands, which spreads over the hair and skin for waterproofing purposes. Pickering Laboratories manufactures an artificial sebum formulation according to ASTM designation D4265-14 or D4265-98. It is ready-to-use and provides the reliability, reproducibility and convenience needed for testing.

D4265-14 Artificial Sebum	
Catalog No.	Description
1700-0700	Artificial Sebum, ASTM D4265-14, Not Stabilized, each (25 g/bottle)
1700-0702	Artificial Sebum, ASTM D4265-14, Not Stabilized, each (200 g/bottle)

Eccrine Perspiration-Sebum Emulsion

Inspired by the ASTM D4265-98 method for staining, Eccrine Perspiration is emulsified with Artificial Sebum. Prepared without dust/dirt for a more universal application, this emulsion mimics non-exercise induced skin surface film liquids (SSFL). As SSFL, it can be used to test any topical use product or the stability of any article that will come in contact with human sweat. This product requires refrigeration to remain in solution and prevent rancidity.

Eccrine Perspiration-Sebum Emulsion	
Catalog No.	Description
1700-0547	Artificial Eccrine Sweat-Sebum Emulsion, each (250 mL/bottle)
1700-0549	Artificial Eccrine Sweat-Sebum Emulsion, each (950 mL/bottle)