CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2025
DateRun:	03/06/2025
Experimenters:	Amelia Wagner
ClientType:	Department of Public Works
ProjectNumber:	Project #2
Substrates:	Stainless Steel
PartType:	Coupon
Contaminants:	Asphalt
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To find an effective alternative cleaner to remove asphalt, tar, and staining from road maintenance tools and work truck beds.
Experimental Procedure:	Three pre-weighed stainless steel coupons were assigned to each cleaner. A tablespoon of EZ Street Premium Cold Asphalt was placed on each coupon before sandwiching the contaminated coupon between two steel plates. A mid-size compact car (curb weight: 3,186lbs-3,559lbs) rolled over the steel plates five times in a forward motion to compress the asphalt to the coupons which released the oil and grease to allow the gravel to adhere to the substrate. Dirty weights of the coupons were recorded before testing the cleaners using unheated immersion for 20 minutes with a stir bar set to 200rpm. Once removed, each coupon was wiped with a paper towel to remove the dissolved soil and assess efficacy visually before taking final weights.

Results:

Cleaner	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG
Anisole	0.9001	0.0132	98.5335	98.5345
	0.8742	0.0125	98.5701	
	1.0400	0.0156	98.5000	
Ethyl Benzoate	0.9311	0.0157	98.3138	98.4092
	0.9896	0.0174	98.2417	
	1.4309	0.0190	98.6722	

Summary:

Conclusion: Anisole and Ethyl Benzoate are both highly effective in removing asphalt from stainless steel.