# CLEANING LABORATORY EVALUATION SUMMARY

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|---|---|
| SCL #: | 2023 |
| DateRun: | 08/28/2023 |
| 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 cleaner to remove asphalt staining, oil, grease, and adhered gravel from stainless steel coupons. |
| Experimental Procedure: | Two were chosen for testing; 1. Soyclear 1500 100%, and 2. DS-108 Wipe Solvent 100%. Three stainless steel coupons were assigned to each cleaner for a total of six coupons. Initial weights of the coupons were recorded. About a tablespoon of EZ Street Premium Cold Asphalt was placed on each coupon. The coupons were then placed between two steel plates. A car was driven over the steel plates five times in order to compress the asphalt to the coupons, releasing the oil and grease and causing gravel to become adhered to the coupons. The dirty weights of the coupons were then recorded. The coupons were then subjected to unheated immersion within their corresponding cleaner for 20 minutes with a stir bar set to 200rpm. Once removed, each coupon was wiped once with a paper towel to remove the dissolved soil. Clean weights of the coupons were then recorded. |

Results:

| Cleaner | Initial wt of cont. | Final wt of cont. | %Cont Removed | % AVG |
|---|---|---|---|---|
| Soyclear 1500 100% | 2.0855 | 0.0028 | 99.87 | 99.43 |
| | 1.4404 | 0.0041 | 99.72 | |
| | 0.3229 | 0.0042 | 98.70 | |
| DS-108 Wipe Solvent 100% | 0.5635 | 0.0005 | 99.91 | 99.74 |
| | 0.7907 | 0.0048 | 99.39 | |
| | 0.6991 | 0.0005 | 99.93 | |

Summary:

Conclusion: Soyclear 1500 100% and DS 108 Wipe Solvent 100% are effective cleaners in removing asphalt from stainless steel. They passed both gravimetric testing parameters and visual requirements. Future testing will include a reduction of time and a reduction in product concentration.