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# Test Monitoring Center

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MEMORANDUM: 23-005

DATE: March 7, 2023

TO: HTCBT Surveillance Panel

FROM: Brittany Pfleegor

SUBJECT: Reference Oil 44-5 Initial Test Targets

In the March 3, 2023 HTCBT surveillance panel meeting, a motion was made and approved to introduce reference oil 44-5 into the calibration system using the test targets based upon 16 data points. The initial targets are shown in Table 1 below:

Table 1: Reference Oil 44-5 Initial Test Targets (N=16)			
Parameter	Mean <sup>A</sup>	Standard Deviation <sup>A</sup>	Acceptance Range
Copper Concentration <sup>B</sup>	4.7446	0.2071	77 to 172
Lead Concentration	33	6.3666	20 to 45

<sup>A</sup> These values were not rounded or changed

<sup>B</sup> Mean and Standard Deviation in transformed units

The individual test results used in generation of these test targets are shown in Table 2. The individual test results, initial test target acceptance range, and the test target acceptance range for reference oils 44-3 and 44-4 for *Lead Concentration* and *Copper Concentration* are plotted in Figures 1 and 2, respectively.

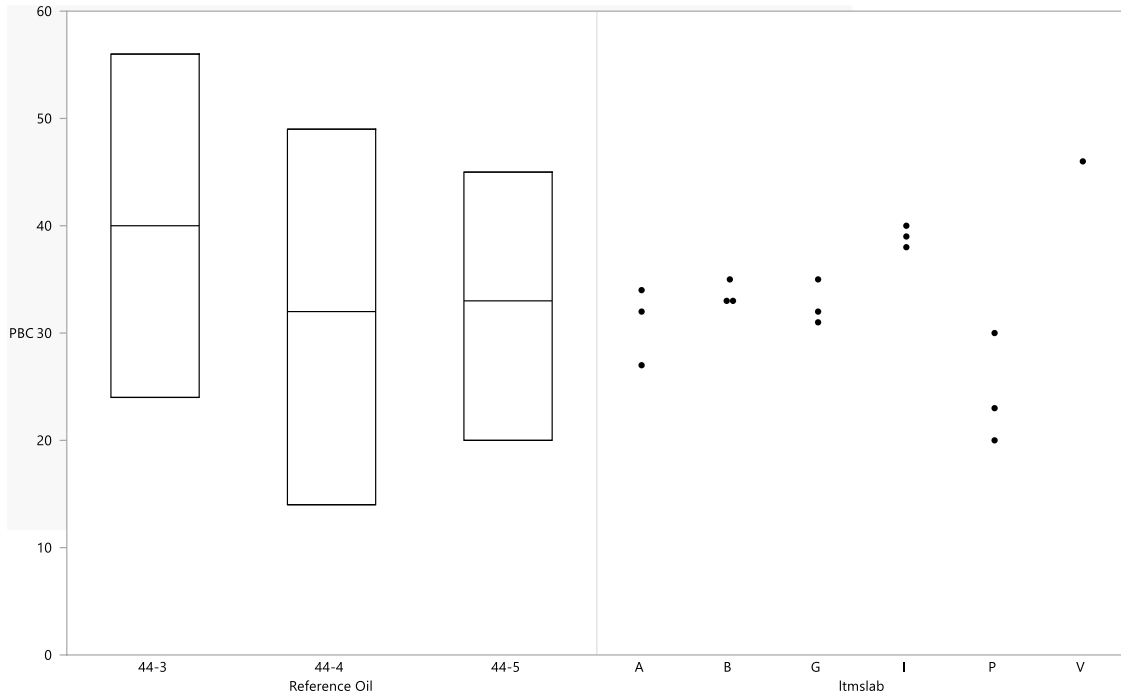
These test targets will be updated when 30 data points are available and updated and frozen after six months of use on this reference oil.

These targets are effective on March 17, 2023.

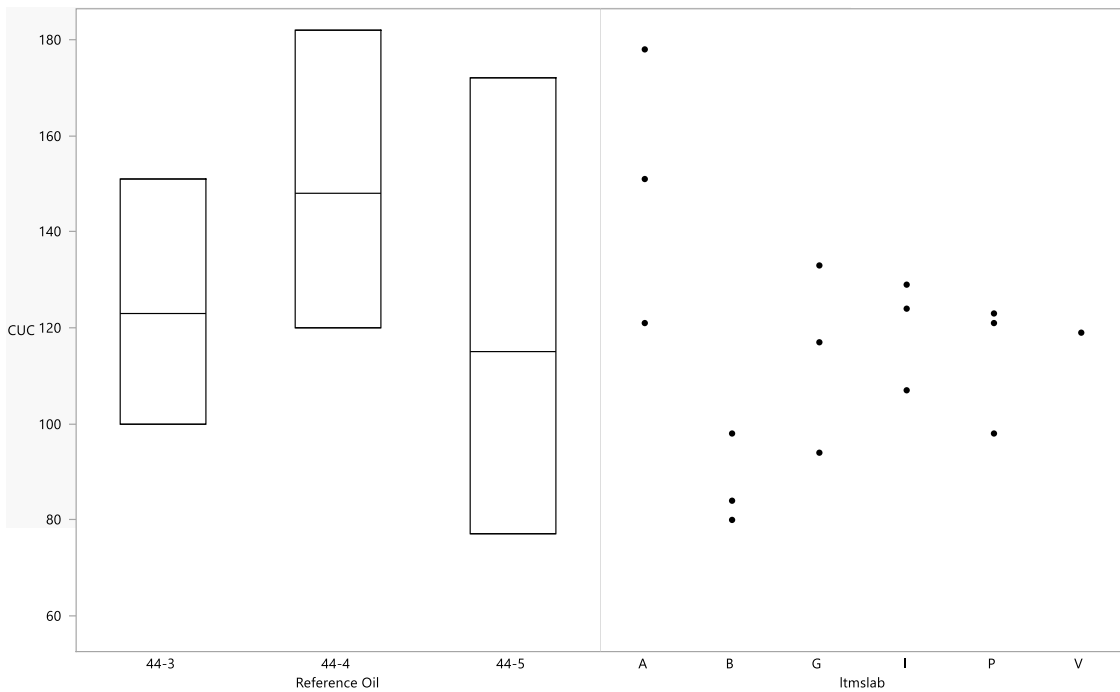
C: [https://astmtmc.org/ftp/docs/bench/htcbt/memos/mem23-005\\_bjp.pdf](https://astmtmc.org/ftp/docs/bench/htcbt/memos/mem23-005_bjp.pdf)

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**Figure 1: Change in Lead Concentration  
Test Target Data Set and Acceptance Bands  
HTCBT Reference Oil 44-5**



**Figure 2: Change in Copper Concentration  
Test Target Data Set and Acceptance Bands  
HTCBT Reference Oil 44-5**



**Table 2: Initial Individual Test Results Reference Oil 44-5**

TEST KEY	LAB	BATH NO	COUPON BATCH	DATE	TIME	PBC	CUC	CUCti
175323-HTCBT	B	1	O	20221005	11:20	35	80	4.382
175324-HTCBT	B	10	O	20221011	7:43	33	98	4.585
175325-HTCBT	B	13	O	20221012	8:05	33	84	4.4308
175314-HTCBT	I	4	O	20221019	11:00	38	129	4.8598
175316-HTCBT	I	7	O	20221019	11:00	39	107	4.6728
175315-HTCBT	I	5	O	20221020	11:00	40	124	4.8203
175312-HTCBT	P	1	O	20221025	10:00	20	123	4.8122
175311-HTCBT	P	2	O	20221026	10:00	30	98	4.585
175313-HTCBT	P	2	O	20221102	10:00	23	121	4.7958
175786-HTCBT	G	2	O	20221102	16:30	35	117	4.7622
175787-HTCBT	G	1	O	20221103	16:00	32	94	4.5433
175320-HTCBT	A	1	O	20221104	14:14	32	178	5.1818
175788-HTCBT	G	2	O	20221109	19:00	31	133	4.8903
175317-HTCBT	V	4	O	20221116	16:00	46	119	4.7791
175321-HTCBT	A	2	O	20221117	8:12	34	151	5.0173
175322-HTCBT	A	5	O	20221118	13:21	27	121	4.7958