DRUG ENFORCEMENT ADMINISTRATION

CY 2024

Annual Methamphetamine Report

OFFICE OF FORENSIC SCIENCES

Special Testing and Research Laboratory

UNCLASSIFIED

PRB# 2025-114

This report was prepared by the DEA Special Testing and Research Laboratory (SFL1) of the Office of Forensic Sciences.
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CY 2024 | Annual Methamphetamine Report:

DEA Laboratory System Reporting

UNCLASSIFIED
PRB# 2025-114

SUMMARY

The United States Drug Enforcement Administration Office of Forensic Sciences laboratory system is comprised of nine regional laboratories distributed across the United States. Domestic methamphetamine seizures are identified and quantitated in the laboratory system's regional laboratories. The information provided on the following pages summarizes the collective results of methamphetamine samples analyzed in regional laboratories for CY 2024. Results presented in this report are subject to change as they account for the information available at the time of publication.

Additionally, the Special Testing and Research Laboratory's Methamphetamine Profiling Program (MPP) provides scientific data and intelligence information on a select number of samples from illicit methamphetamine submitted to the program. Submissions to the MPP are analyzed for purity, cutting agents, precursors utilized, and synthetic route. MPP findings provide a snapshot of current methamphetamine quality and trafficking trends; it may not reflect the domestic or global illicit methamphetamine supply in its entirety, nor is it representative of total federal methamphetamine seizures.

This report also summarizes the collective results of methamphetamine profiling analyses performed on samples seized in CY 2024. This will conclude reporting on CY 2024 methamphetamine seizures. As such, a final year-end summary of methamphetamine trends observed by the MPP is provided in this report, to include comparison to methamphetamine seizures submitted to the laboratory system as a whole during CY 2024. In addition, this report will provide a summary of all foreign submissions analyzed by the MPP between July 2024 and March 2025.

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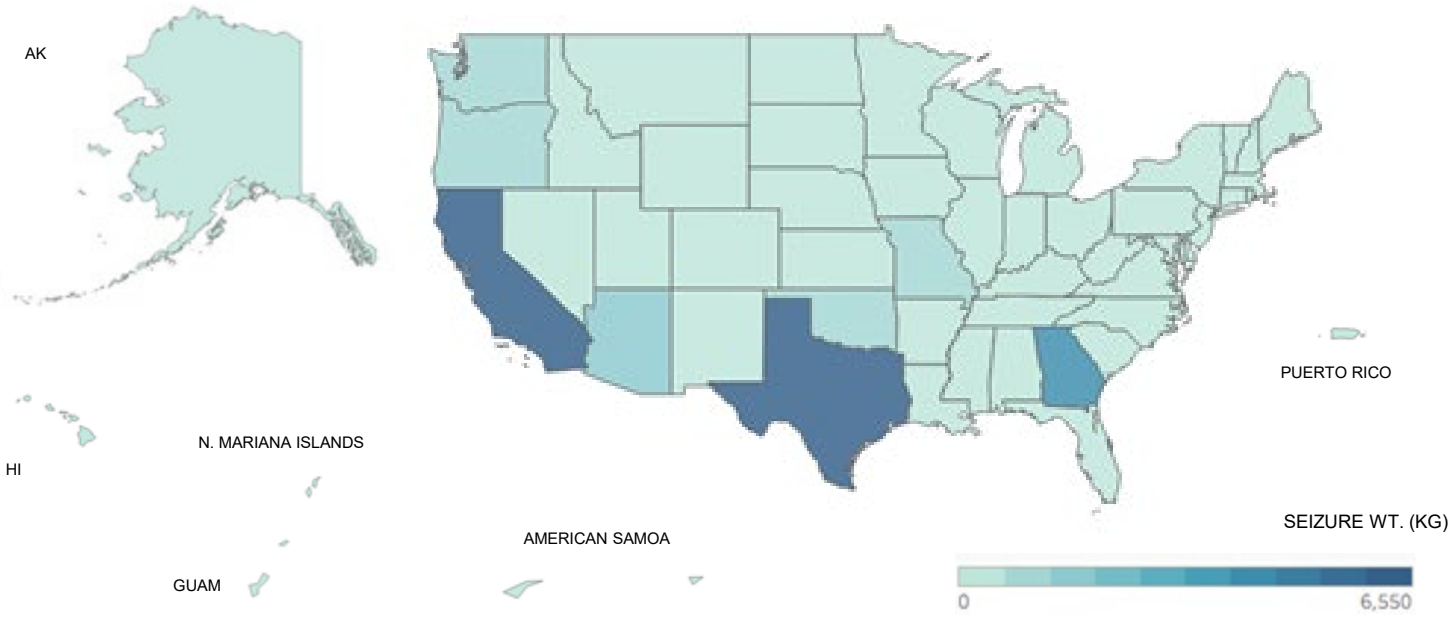
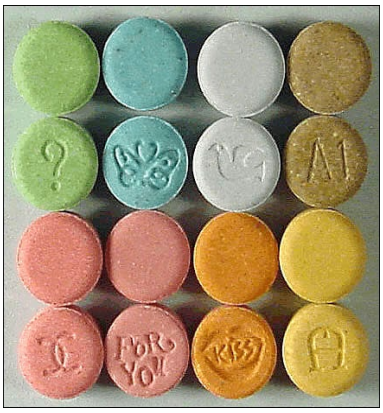
Figure 1: DEA Laboratory System Reporting Regional Map



KEY FINDINGS

- In CY 2024, **17,404 methamphetamine exhibits** in various forms were submitted to regional laboratories and **15,499 were quantitated** as of this reporting period.
- The average purity of crystalline methamphetamine samples analyzed by regional laboratories was **95.2%.**
- Crystalline methamphetamine **accounted for approximately 79%** of all meth exhibits analyzed by the laboratory system.

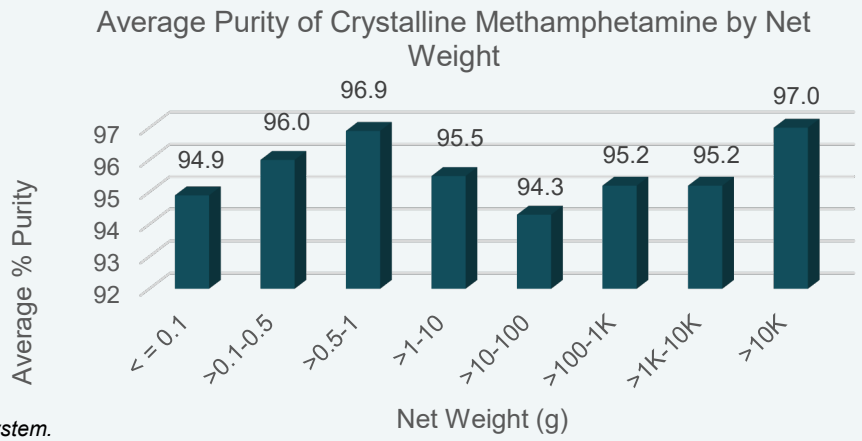


- Of the exhibits listed above, samples of 486 domestically seized exhibits were submitted to the MPP for additional analysis. The samples that underwent additional profiling represent approximately 13,162 kilograms of methamphetamine seized throughout the United States.
- The average purity of domestically seized samples that underwent profiling by MPP was 95.2% (range: 1.2% - 100%). Potency continues to match purity indicating operators are isolating the desired d-isomer.
- Manufacturing Specific Observations of Profiled Samples:
  - **Primary Synthetic Route:** Reductive Amination
  - **Primary Precursor:** Phenyl-2-Propanone (P2P)
  - **Primary Precursor P2P:** Phenylacetic Acid (PAA)

DOMESTIC SUBMISSIONS

In CY 2024, 30,698 kilograms of methamphetamine in crystalline form were analyzed by regional laboratories. The table below summarizes methamphetamine exhibits analyzed by state.

Figure 2: Regional Laboratory Purity



This data was compiled from the Laboratory Information Management System. The data represents drug evidence seized and analyzed by the DEA regional laboratories in CY 2024.

State	Number of Exhibits	Net Weight (kg)	Avg. Purity (%)
Alabama	496	169.73	93.3
Alaska	138	96.82	94.6
American Samoa	170	1.42	98.3
Arizona	303	1,557.80	97.9
Arkansas	409	397.67	95.6
California	2,421	6364.24	97.5
Colorado	215	379.42	98.3
Connecticut	71	32.98	97.5
Delaware	18	3.85	98.0
D.C.	56	0.91	96.9
Florida	1,106	623.39	94.1
Georgia	657	4,653.42	89.5
Guam	79	4.04	96.8
Hawaii	174	171.23	96.5
Idaho	55	9.97	98.8
Illinois	498	386.25	95.7
Indiana	408	258.47	93.1
Iowa	100	86.42	96.5
Kansas	53	165.18	97.2
Kentucky	494	552.50	91.2
Louisiana	221	172.18	94.2
Maine	71	8.00	97.6
Maryland	26	11.29	96.7
Massachusetts	218	218.87	96.8
Michigan	183	326.23	94.9
Minnesota	117	604.08	95.8
Mississippi	384	334.41	94.4
Missouri	490	722.79	95.1
Montana	351	87.33	97.2

State	Number of Exhibits	Net Weight (kg)	Avg Purity (%)
Nebraska	93	54.97	97.0
Nevada	80	108.83	98.9
New Hampshire	110	31.97	98.3
New Jersey	89	174.21	97.4
New Mexico	178	333.13	96.2
New York	414	423.05	95.0
North Carolina	588	299.55	93.0
North Dakota	24	17.74	98.3
N. Mariana Islands	6	17.42	99.6
Ohio	321	207.89	92.5
Oklahoma	393	1,246.15	95.3
Oregon	167	812.06	96.6
Pennsylvania	281	370.64	95.0
Puerto Rico	13	8.48	96.0
Rhode Island	20	13.70	96.5
South Carolina	209	97.18	90.0
South Dakota	82	33.76	95.8
Tennessee	522	239.92	92.1
Texas	2,535	6569.65	95.4
Utah	45	114.95	95.0
Vermont	11	0.04	99.2
Virginia	173	146.97	93.3
Washington	446	695.02	97.3
West Virginia	431	180.34	97.7
Wisconsin	188	80.41	96.0
Wyoming	3	19.24	98.7

DOMESTIC SUBMISSIONS

Crystalline, powder and rock-like exhibits accounted for approximately 85% of all meth exhibits analyzed in 2024. The average purity for these forms was 95.0%. Tablet exhibits were approximately 11% of all analyzed exhibits with an average purity of 4.7%. Approximately 1% of exhibits were liquid samples with an average purity of 37.1%.

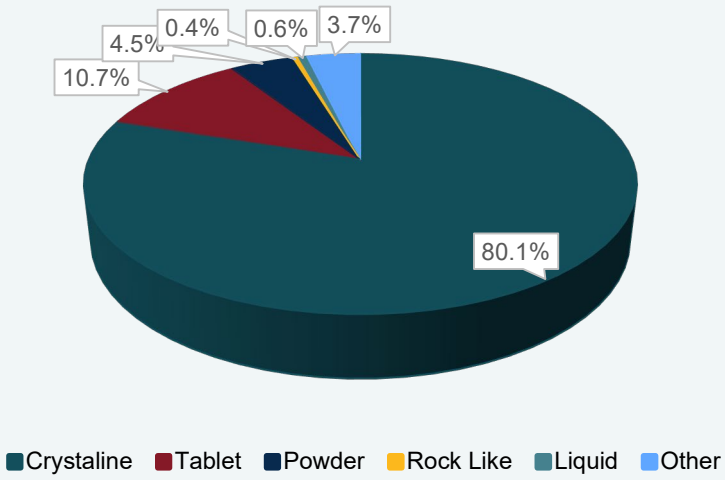


Figure 3: Substances Commonly Reported in Crystalline Exhibits

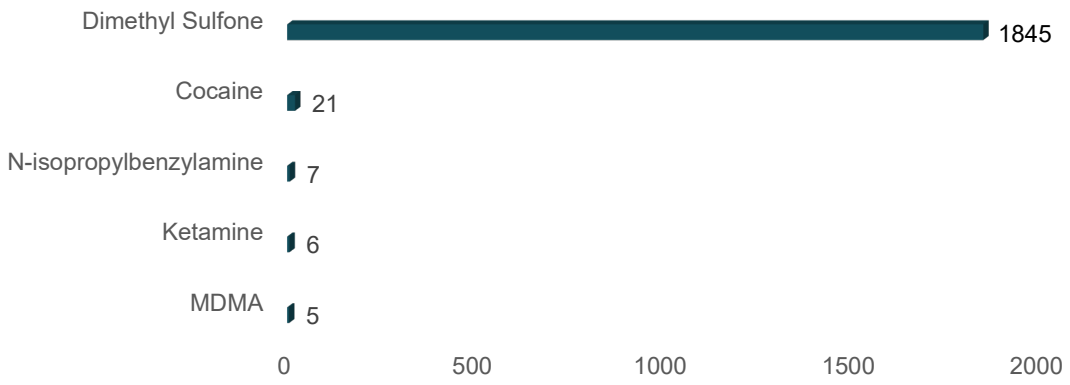
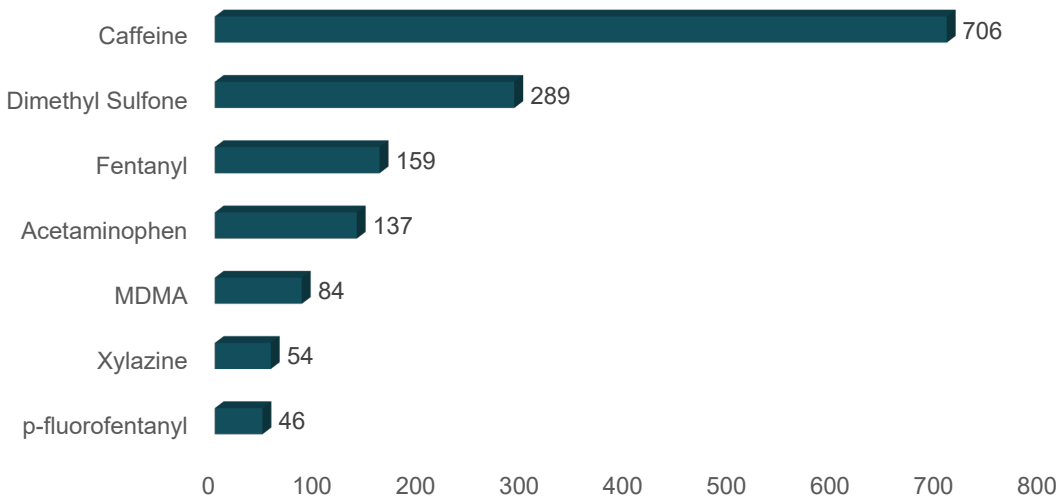


Figure 4: Substances Commonly Reported in Tablet Exhibits



This data was compiled from the Laboratory Information Management System.
The data represents drug evidence seized and analyzed by the DEA regional laboratories in CY 2024.

CHEMICAL ANALYSIS TRENDS

Figure 5: Regional Lab Purity and Seizure Trends (Crystalline)

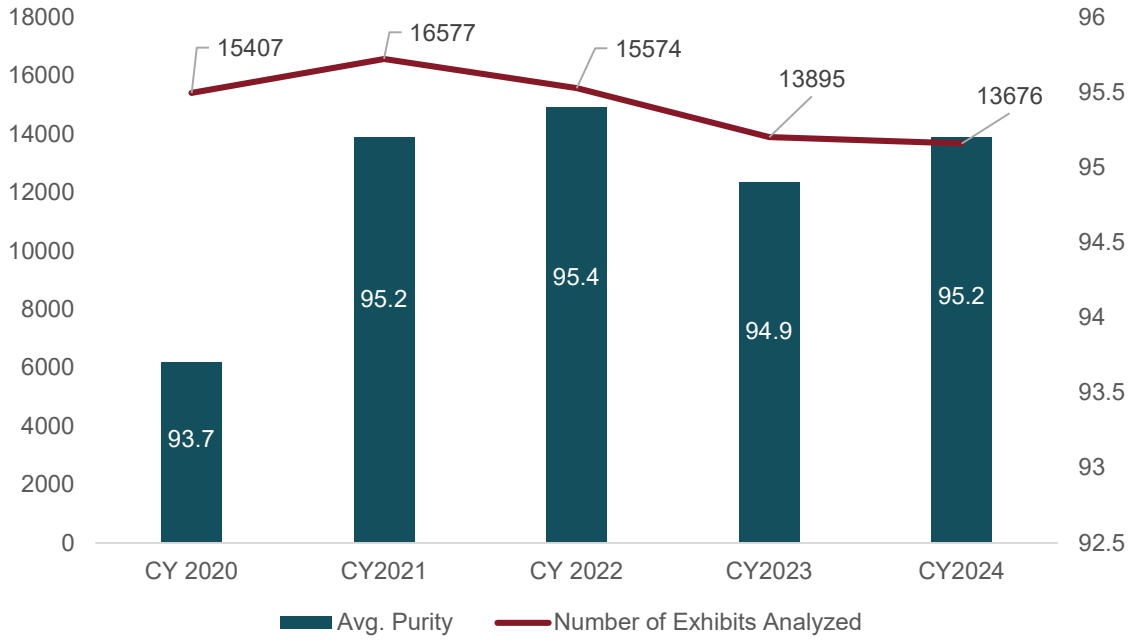
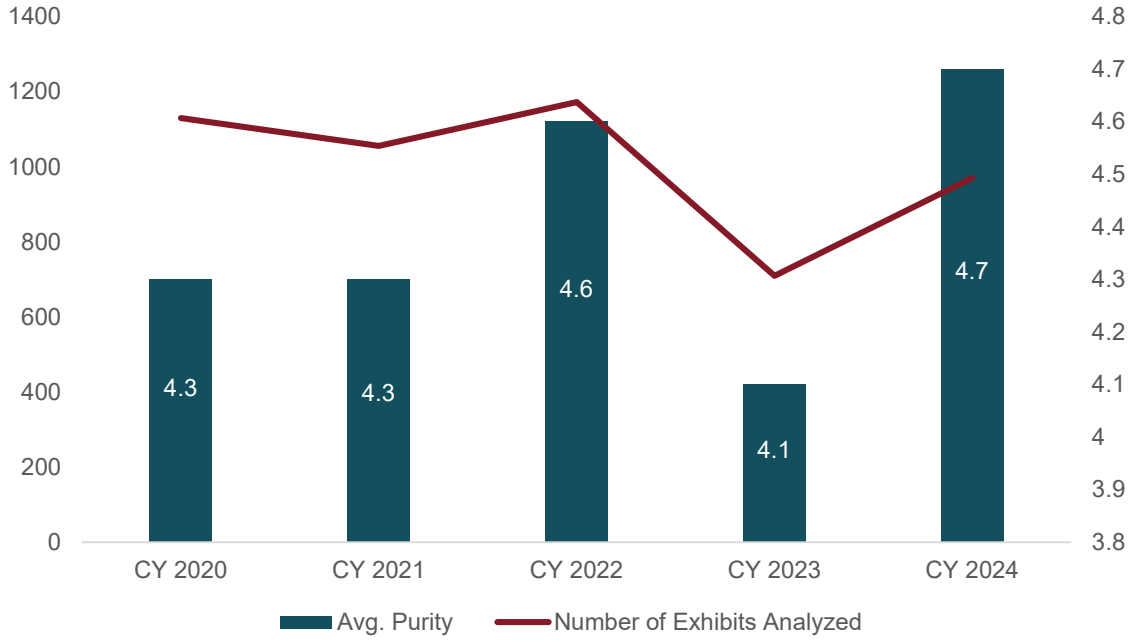


Figure 6: Regional Lab Purity and Seizure Trends (Tablet)



This data was compiled from AIDD. The data represents drug evidence seized and analyzed by the DEA regional laboratories in CY 2024.

DOMESTIC SUBMISSIONS

The MPP conducts an in-depth chemical analysis of selected methamphetamine samples seized throughout the United States to establish trends associated with its manufacture. A selected domestic methamphetamine sample will be powdered or crystalline material, or an unusual or liquid matrix, with a purity of at least 10% and with a reserve weight of at least 6 grams as determined by the DEA Regional Laboratory analysis. The established sampling plan seeks to obtain portions of seizures representing varying seizure sizes from each of the regions depicted in Figure 1. As areas of responsibility of DEA Division Offices and Regional Laboratories routinely shift, for consistency in reporting, the MPP has used these regional designations depicted since the inception of the program.

Figure 1: MPP Regional Map

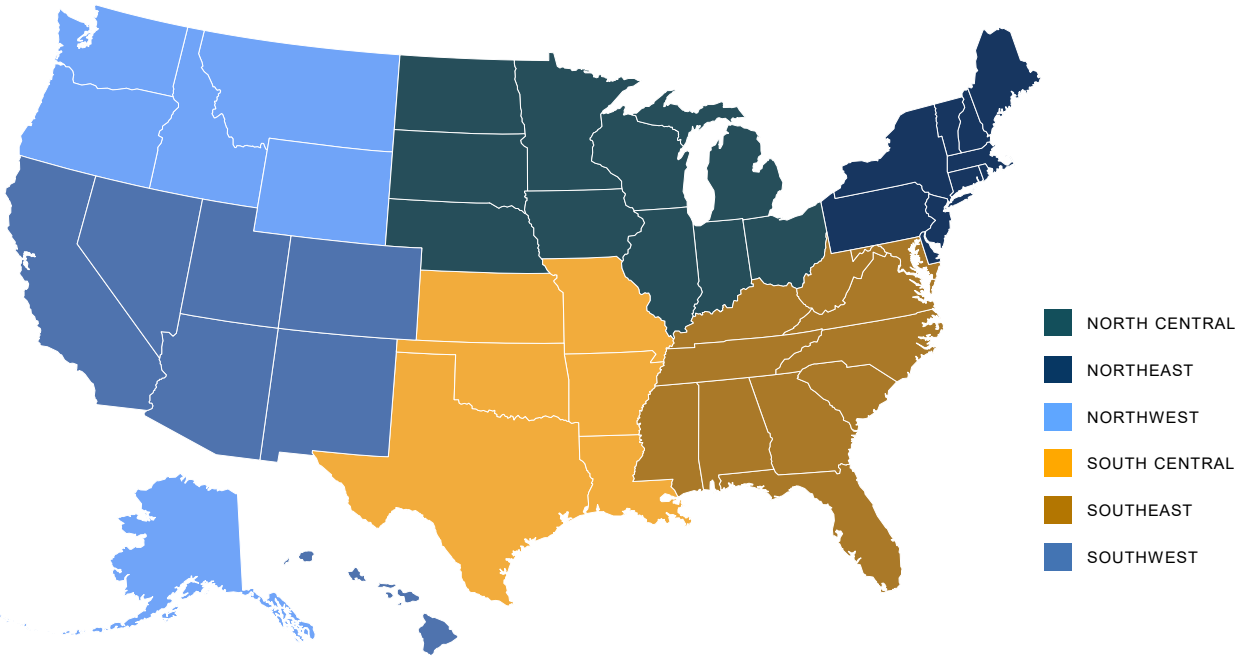
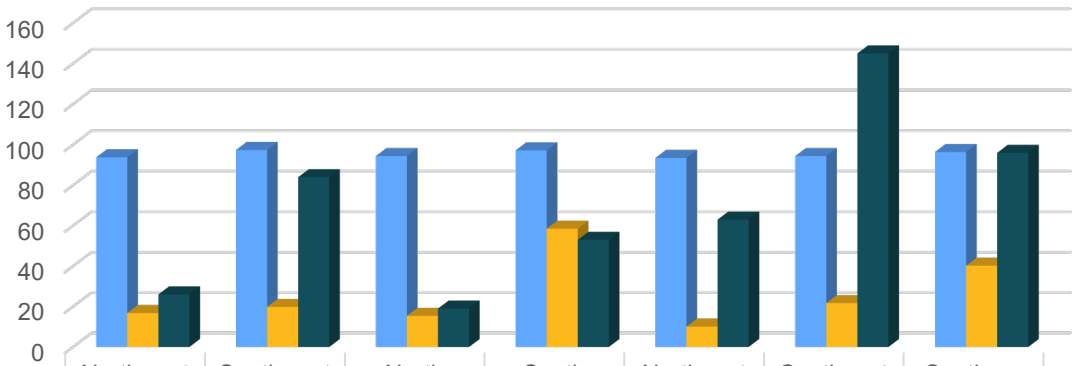


Figure 2: Regional Overview for CY2024 MPP Exhibits Analyzed



	Northwest	Southwest	North Central	South Central	Northeast	Southeast	Southern Border
Avg. Purity	93.8	97.4	94.4	97.2	93.5	94.4	96.4
Avg. Seizure (kg)	16.8	19.8	15.4	58.5	10.1	21.7	40.2
# Ex. Analyzed	26	84	19	53	63	145	96

DOMESTIC SUBMISSIONS

DOMESTIC RESULTS AND TRENDS

Overall average methamphetamine purity continues to be at high levels with the average being 95.3%. This is a slight decrease from the 95.5% reported at the same time last year. Overall methamphetamine purity results ranged from 1.2%-100% with approximately 92% of the samples analyzed having a purity >95%. In addition, the potency of methamphetamine continues to match purity results. Potency calculations monitor the amount of the unwanted l-methamphetamine isomer present in analyzed samples. Purity and potency levels being calculated as the same value suggests that virtually all the unwanted l-isomer has been eliminated from the final product during clandestine production.

During this reporting period, approximately 21% (n=101) of samples received were cut with dimethylsulfone (DMS). The DMS purities for these samples ranged from trace amounts to 84%. The average purity of DMS for exhibits containing more than trace amounts was approximately 10%.

Reductive amination remains the preferred synthetic manufacturing route for methamphetamine with 97.9% of the MPP samples analyzed profiled as originating from a P2P precursor. Based on this MPP sample subset, at the 95% confidence level, 98 to 100% of the crystal, powder, liquid, or tablet methamphetamine samples analyzed by the regional laboratories have P2P as the precursor. Furthermore, at the 95% confidence level, 77 to 85% of said samples have PAA as the P2P precursor. Approximately 6% (n=49) of these P2P-based samples showed evidence of being converted to methamphetamine under Leuckart conditions. This process uses methylamine and formic acid or N-methylformamide as supporting chemicals. This percentage is a slight decrease compared to CY 2023 seizures (~9%). In addition, the MPP has been monitoring the Mercury Amalgam sub-classification with approximately 1% of seizures (n=12) observed to have been synthesized under these conditions.

SUMMARY OF CY 2024 MPP SAMPLES ANALYZED

REGION	TOTAL #	# SMALL (<499 G)	# MEDIUM (500G – 9.9KG)	# LARGE (>10 KG)	AVERAGE PURITY
NORTHWEST	26	4	8	14	93.8%
SOUTHWEST	84	8	41	35	97.4%
NORTH CENTRAL	19	7	4	8	94.4%
SOUTH CENTRAL	53	14	20	19	97.2%
NORTHEAST	63	22	22	19	93.5%
SOUTHEAST	145	66	43	36	94.4%
SOUTHERN BORDER POE	96	16	4	76	96.4%
TOTALS	**486**	**137**	**142**	**207**	**95.3%**

DOMESTIC SUBMISSIONS

CHEMICAL ANALYSIS TRENDS* (CONTINUED)

**Note: Prior to CY 2023, trends were reported bi-annually based on seizure date.*

Figure 6: Average Seizure Size Submitted to MPP (kg)

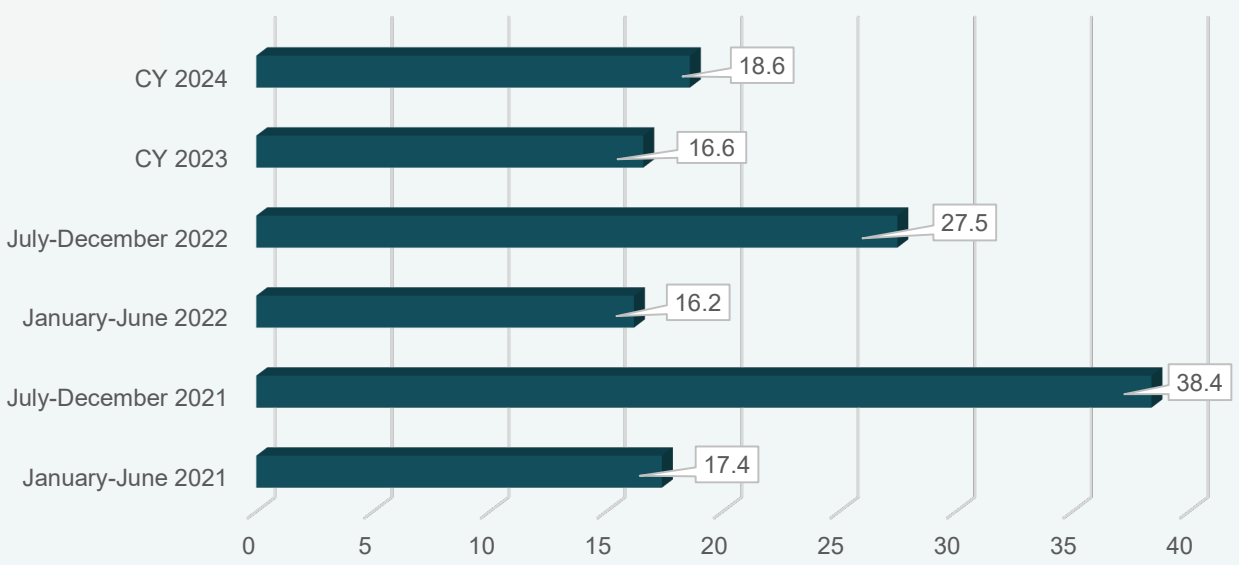
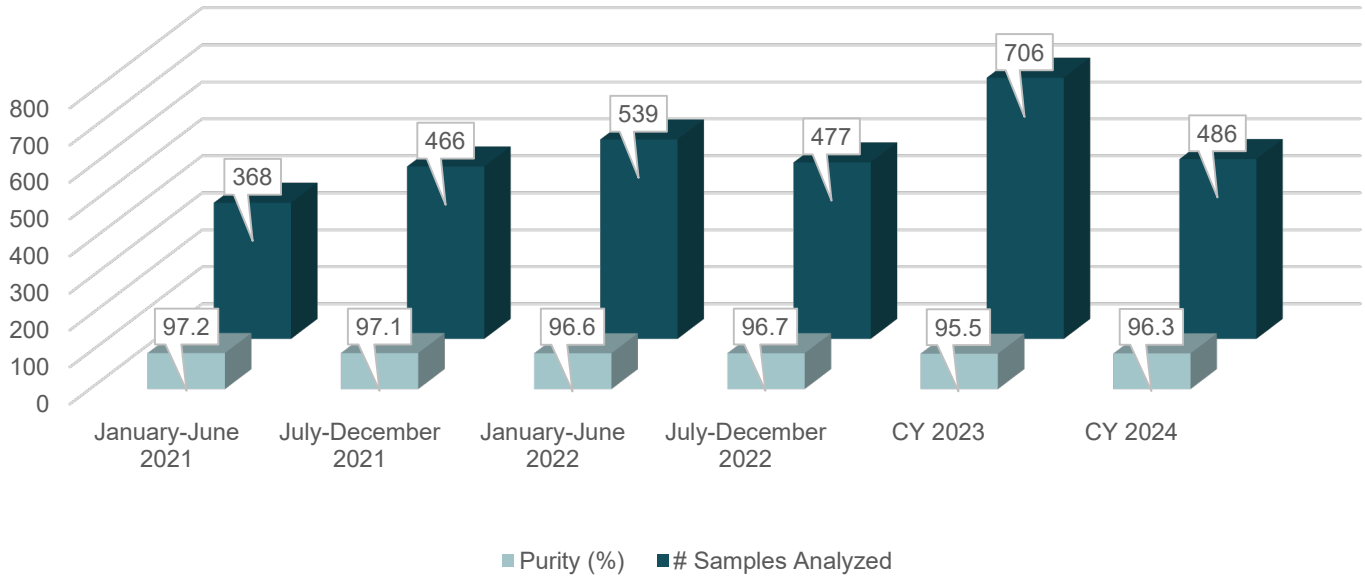


Figure 7: Overall Purity Trends



DOMESTIC SUBMISSIONS

CHEMICAL ANALYSIS TRENDS* (CONTINUED)

Figure 8: Primary Precursor to P2P Trends

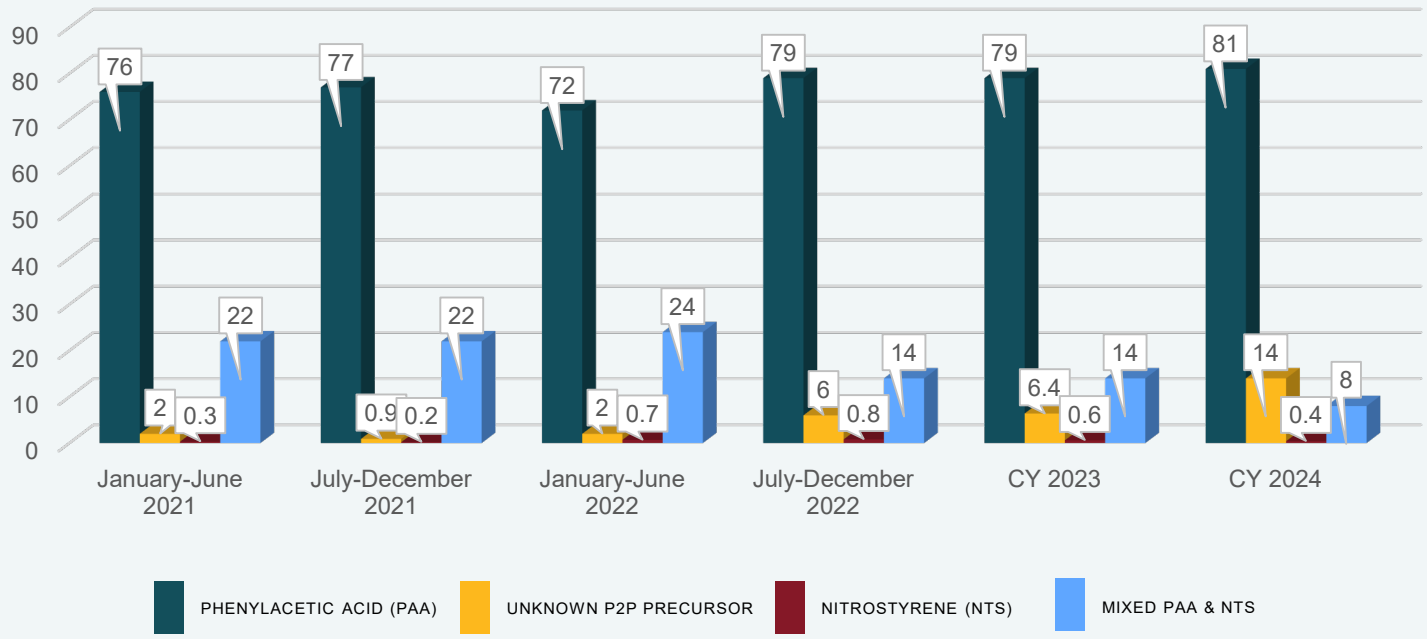
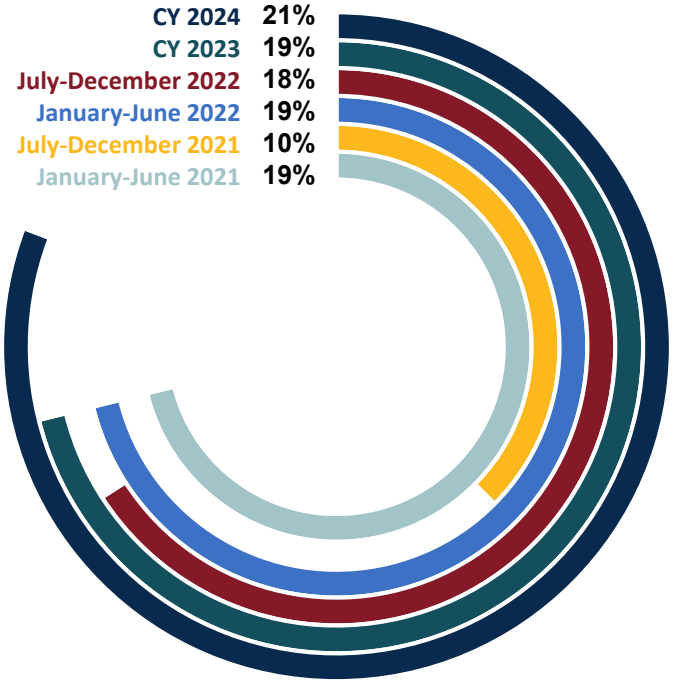


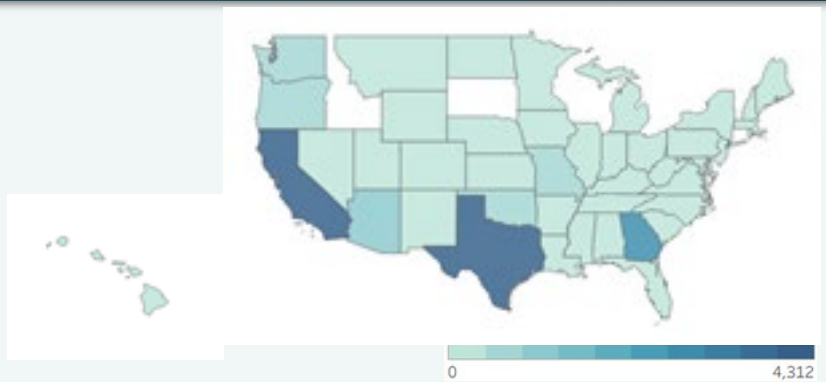
Figure 9: Percentage of MPP Submissions Cut with DMS



DOMESTIC SUBMISSIONS

DOMESTIC RESULTS AND TRENDS

The table below and maps depicted in the following pages summarize the MPP findings of CY 2024 seizures at a state and regional level.



State	Total MPP Seizure Wt. Represented (kg)	Min. Purity (%)	Max. Purity (%)
AL	27.7	27.2	99.4
AR	1689.5	78.9	99.1
AZ	636.3	97.7	99.1
CA	4312.0	82.6	100.0
CO	215.5	93.6	99.7
FL	345.6	28.1	99.8
GA	3072.6	31.1	99.7
HI	45.2	95.1	99.4
IA	16.5	98.1	99.1
IL	30.0	62.5	99.3
IN	52.3	97.6	99.4
KS	146.6	88.0	98.9
KY	98.1	67.8	99.2
LA	30.2	87.3	98.8
MA	58.0	97.2	99.0
MD	0.01	---	97.4
ME	0.3	97.0	99.4
MI	6.0	36.3	98.7
MN	229.6	95.6	99.2
MO	76.1	94.8	99.5
MS	142.7	68.4	99.4

State	Total MPP Seizure Wt. Represented (kg)	Min. Purity (%)	Max. Purity (%)
MT	35.1	90.0	99.1
NC	36.9	91.0	100.0
ND	11.7	---	98.3
NE	11.75	---	98.7
NH	8.29	97.9	99.4
NJ	87.8	85.5	98.9
NM	292.5	95.5	99.3
NV	40.4	93.3	98.7
NY	490.2	1.2	99.5
OH	49.5	93.4	99.2
OK	8.0	96.8	97.8
OR	378.2	94.4	99.4
PA	302.1	66.0	99.7
RI	0.2	---	97.2
SC	10.7	92.6	98.9
TN	26.1	71.3	99.3
TX	1393.0	85.2	99.9
UT	56.4	93.7	98.9
VA	4.97	83.8	98.9
WA	273.2	46.5	99.6
WV	112.2	95.6	99.2
WY	21.8	97.6	98.6

DOMESTIC SUBMISSIONS

REGIONAL CHEMICAL ANALYSIS RESULTS

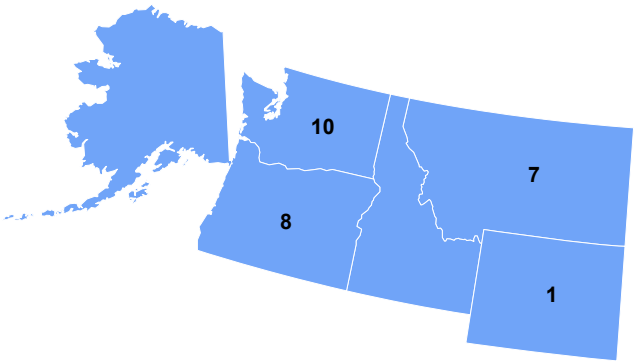


Figure 10: # samples per state

NORTHWEST REGION

The MPP analyzed 26 samples from the Northwest Region with seizure sizes ranging from 100 g to 59 kg. All but two samples were manufactured via reductive amination with P2P as the primary precursor (one sample from unknown route). PAA was identified as the primary precursor to P2P in 21 samples, with an additional 2 showing the precursor to P2P was a mixed source of PAA and nitrostyrene, and 1 sample of an unknown source. Two samples could not have their precursors identified and were classified as an unknown route. Dimethylsulfone was identified as an adulterant in 4% of the samples analyzed

AVG PURITY

96.0% SMALL SEIZURES

86.3% MEDIUM SEIZURES

97.0% LARGE SEIZURES

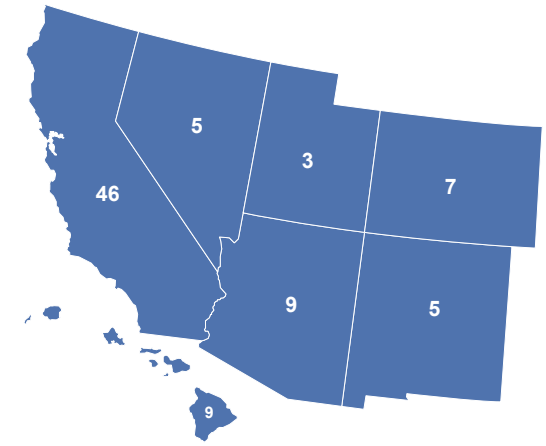


Figure 11: # samples per state

SOUTHWEST REGION

The MPP analyzed 84 samples from the Southwest Region with seizure sizes ranging from 30 g to 238 kg. All samples were manufactured via reductive amination with P2P as the primary precursor. PAA was identified as the primary precursor to P2P in 74% of the samples, with an additional 20% showing the precursor to P2P was a mixed source of PAA and nitrostyrene, and 5% of an unknown source. Dimethylsulfone was identified as an adulterant in 12% of the samples analyzed. A Leuckart sub-classification was identified in 5% of samples, and a mercury amalgam sub-classification was identified in 6% of samples.

AVG PURITY

98.4% SMALL SEIZURES

97.4% MEDIUM SEIZURES

97.2% LARGE SEIZURES

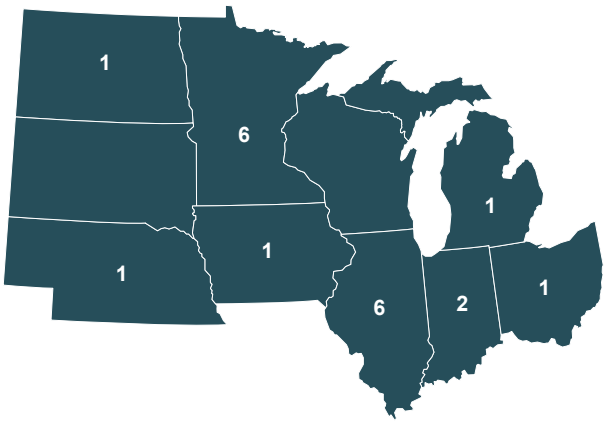


Figure 12: # samples per state

NORTH CENTRAL REGION

The MPP analyzed 19 samples from the North Central Region with seizure sizes ranging from 60 g to 81 kg. All but one sample were manufactured via reductive amination with P2P as the primary precursor. PAA was identified as the primary precursor to P2P in 79% of the samples, with an additional 16% showing the precursor to P2P was a mixed source of PAA and nitrostyrene. Dimethylsulfone was identified as an adulterant in 13% of the samples analyzed. A Leuckart sub-classification was identified in 14% of samples.

AVG PURITY

89.1% SMALL SEIZURES

96.7% MEDIUM SEIZURES

97.9% LARGE SEIZURES

DOMESTIC SUBMISSIONS

REGIONAL CHEMICAL ANALYSIS RESULTS (CONTINUED)

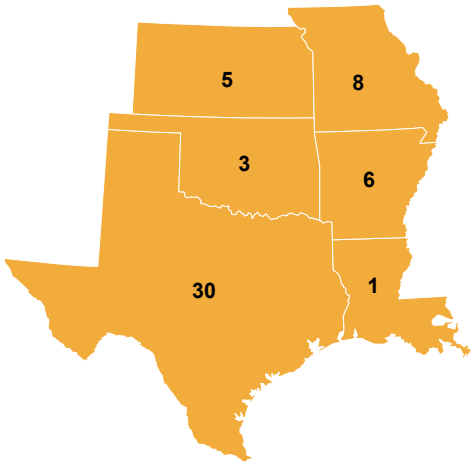


Figure 13: # samples per state

SOUTH CENTRAL REGION

The MPP analyzed 53 samples from the South Central Region with seizure sizes ranging from 20 g to 1634 kg. All samples were manufactured via reductive amination with P2P as the primary precursor. PAA was identified as the primary precursor to P2P in 75% of the samples, with an additional 15% showing the precursor to P2P was a mixed source of PAA and nitrostyrene, and 8% of an unknown source. Dimethylsulfone was identified as an adulterant in 13% of the samples analyzed. A Leuckart sub-classification was identified in 11% of samples.

AVG PURITY

97.6% SMALL SEIZURES

97.7% MEDIUM SEIZURES

96.4% LARGE SEIZURES

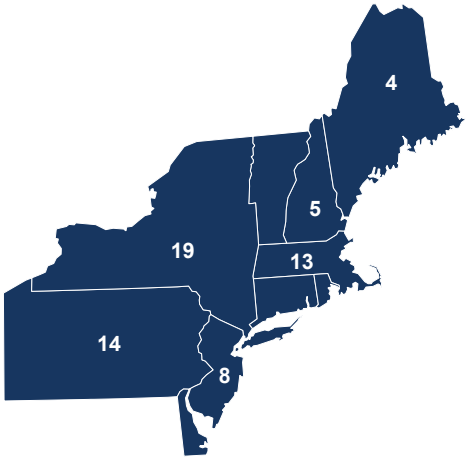


Figure 14: # samples per state

NORTHEAST REGION

The MPP analyzed 63 samples from the Northeast Region with seizure sizes ranging from 60 g to 116 kg. All but one sample were manufactured via reductive amination with P2P as the primary precursor. One sample could not be profiled due to low purity and was classified as “unknown”. PAA was identified as the primary precursor to P2P in 79% of the samples, with an additional 14% showing the precursor to P2P was a mixed source of PAA and nitrostyrene, and 3% of an unknown source. One sample was sourced to nitrostyene. One sample contained some l-methamphetamine. Dimethylsulfone was identified as an adulterant in 13% of the samples analyzed. A Leuckart sub-classification was identified in 5% of samples.

AVG PURITY

89.7% SMALL SEIZURES

98.1% MEDIUM SEIZURES

92.2% LARGE SEIZURES

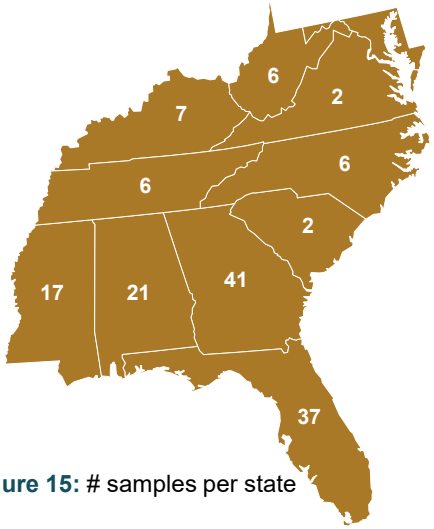


Figure 15: # samples per state

SOUTHEAST REGION

The MPP analyzed 145 samples from the Southeast Region with seizure sizes ranging from 3 g to 1175 kg. All but one sample were manufactured via reductive amination with P2P as the primary precursor. One samples could not be conclusively profiled and were classified as “unknown.” PAA was identified as the primary precursor to P2P in 87% of the samples, with an additional 11% showing the precursor to P2P was a mixed source of PAA and nitrostyrene, and 3% of an unknown source. Dimethylsulfone was identified as an adulterant in 29% of the samples analyzed. A Leuckart sub-classification was identified in 15% of samples.

AVG PURITY

95.5% SMALL SEIZURES

92.2% MEDIUM SEIZURES

94.8% LARGE SEIZURES

DOMESTIC SUBMISSIONS

REGIONAL CHEMICAL ANALYSIS RESULTS (CONTINUED)

SOUTHERN BORDER PORTS OF ENTRY

Ninety-six samples seized at Ports of Entry (POE) along the United States/Mexico border were analyzed during this reporting period, representing approximately 20% of all samples analyzed. A drug quality breakdown by POE state and further individual locations are summarized as follows:

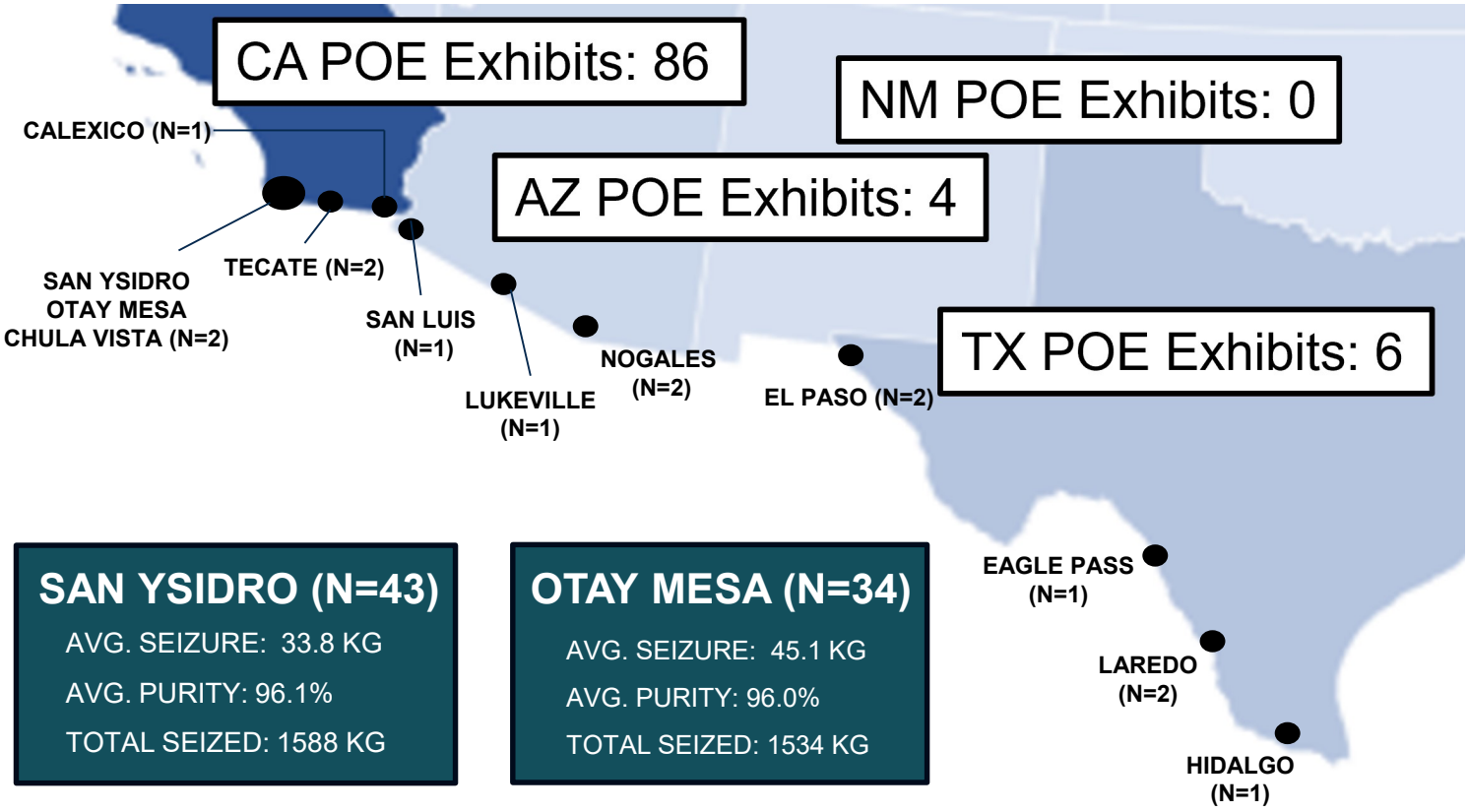
Except for one sample, all samples analyzed from POEs were determined to be manufactured via reductive amination with phenyl-2-propanone (P2P) as the precursor. Additionally, it was determined that the primary precursor to P2P in approximately 84% of the samples was PAA, with an additional 13% showing the precursor to P2P was a mixed source of PAA and nitrostyrene, and 2% were found to be of an unknown source. Approximately 10% (n=10) of these P2P-based samples showed evidence of a Leuckart route being employed. One sample could not be conclusively profiled and was classified as “unknown.”

Most U.S./Mexico border samples (~90%) analyzed by MPP were uncut. Of the samples that were adulterated, dimethylsulfone was the primary cutting agent identified (n=10). Purities of DMS ranged from trace amounts to 43% with an average of approximately 12%.

POE	# SAMPLES ANALYZED	AVERAGE PURITY (CY 2024)	AVERAGE PURITY (CY 2023)	AVERAGE SEIZURE WT. IN KG (CY 2024)	AVERAGE SEIZURE WT. IN KG (CY 2023)
AZ	4	97.7%	97.1%	48.3	11.1
CA	86	96.2%	95.6%	41.8	33.9
TX	6	98.4%	95.4%	11.4	9.9
TOTALS	96	96.4%	96.0%	40.2	18.3

DOMESTIC SUBMISSIONS

SOUTHERN BORDER PORTS OF ENTRY (CONTINUED)



SAN YSIDRO (N=43)
AVG. SEIZURE: 33.8 KG
AVG. PURITY: 96.1%
TOTAL SEIZED: 1588 KG

OTAY MESA (N=34)
AVG. SEIZURE: 45.1 KG
AVG. PURITY: 96.0%
TOTAL SEIZED: 1534 KG

PORT OF ENTRY	AVERAGE SEIZURE (KG)	AVERAGE PURITY (%)	TOTAL SEIZED (KG)
NOGALES	19.0	97.8	38
SAN LUIS	---	97.0	32
LUKEVILLE	---	98.0	123
CALEXICO	---	97.3	0.2
CHULA VISTA	0.6	98.2	1.3
TECATE	116.4	98.2	233
EAGLE PASS	---	98.6	1
EL PASO	1.3	98.2	2.5
HIDALGO	---	98.3	46
LAREDO	3.8	87.6	8

FOREIGN SUBMISSIONS

During this reporting period, the MPP analyzed 53 samples seized outside the United States and submitted by various foreign offices. A summary of the results are detailed by submitting office below.

BAHRAIN

Seventeen samples were obtained by the DEA through an interagency partnership. The samples were seized between January and April 2024. All samples received were pure d-methamphetamine HCl derived from natural ephedra. In 11 cases, the synthetic route was determined to be phorphorous/iodide, and the route for the remaining 6 could not be determined.

CANADA

Fifteen d-methamphetamine HCl samples were obtained by the Ottawa Country Office. Seizure dates ranged between April and September 2024. The average purity of the samples was calculated to be 97.5%. All samples received were determined to be manufactured via reductive amination with P2P as the precursor. In seven samples, the primary precursor to P2P was determined to be phenylacetic acid (PAA). The remaining eight samples showed the primary precursor to P2P originated from a mixed source of PAA and nitrostyrene.

CROATIA

Two samples were submitted by the Zagreb Country Office. Both were seized in October 2024 and were determined to contain bupropion, not methamphetamine.

GUATEMALA

Two samples were submitted to the program by the Guatemala City Country Office with seizure dates in March 2024. The samples were determined to be d-methamphetamine with >98% purity. Both samples were produced by reductive amination of P2P derived from PAA. One of the samples was determined to have been produced by the Leuckart method.

JORDAN

Two samples were submitted to the program by the Cairo Country Office with a seizure date of August 15th, 2024. Both samples were determined to be methamphetamine, with a purity >98%. In one sample, the route of synthesis could not be determined; however, the starting material was determined to be natural ephedra. The other sample was determined to be synthesized from P2P derived from PAA via reductive amination. This sample was found to be a mixture of d- and l-methamphetamine.

FOREIGN SUBMISSIONS

FOREIGN SUBMISSIONS (CONTINUED)

NIGERIA

Ten samples were submitted by the Lagos Country Office. The samples were seized in March, June, and July 2024. The purity range varied significantly, from a low of 26% to a high of 98%. All samples were produced using the phosphorus/iodine method except one which could not be identified, and five of the ten were produced from natural ephedra.

SOUTH AFRICA

One sample was submitted by the Pretoria Country Office. The sample was found to contain 98% d-methamphetamine HCl. The sample was produced by reductive amination of P2P derived from PAA.

TAIWAN

One sample of methamphetamine from Taiwan was obtained through Customs and Border Protection (CBP). This sample was 99% d-methamphetamine. The sample was produced by reductive amination of P2P derived from PAA.

THAILAND

Three samples were obtained from the Bangkok Country Office in July 2024. Two of the three samples were d-methamphetamine with a purity >97%. These samples were produced from synthetic ephedrine/pseudoephedrine. One was determined to have been produced by the phosphorous/iodine method, while the synthetic route of the other sample could not be determined. The third sample was 97.6% l-methamphetamine. The synthetic route or precursor of the l-methamphetamine could not be determined.

FOREIGN SUBMISSIONS

FOREIGN SUBMISSION SUMMARY

Samples Eligible for Methamphetamine Profiling

COUNTRY	# OF SAMPLES	AVERAGE PURITY (%)	PURITY RANGE (%)	MANUFACTURING ROUTE/PRECURSOR
BAHRAIN	17	96.0	85.1-99.7	Phosphorous-Iodine/Natural ephedra (n=11) Unknown/Natural ephedra (n=6)
CANADA	15	97.5	93.5-99.4	Reductive Amination/P2P (n=6)
CROATIA	2	---	---	N/A (bupropion sample) (n=2)
GUATEMALA	2	98.5	98.4-98.5	Reductive Amination/P2P (n=2)
JORDAN	2	98.4	98.2-98.6	Unknown/Natural ephedra (n=1) Reductive Amination/P2P (n=1)
NIGERIA	10	77.4	26.0-99.0	Phosphorous-Iodine/Natural ephedra (n=5) Phosphorous-Iodine/ephedra (n=3) Unknown/Natural Ephedra (n=1)
SOUTH AFRICA	1	---	97.7	Reductive Amination/P2P (n=1)
TAIWAN	1	---	98.9	Reductive Amination/P2P (n=1)
THAILAND	3	97.5	97.4-97.6	Phosphorous-Iodine/Synthetic Ephedra (n=1) Unknown/Synthetic Ephedra (n=1) Unknown (n=1)

BACKGROUND INFORMATION

SAMPLING PLAN

To limit sample submissions while still providing a comprehensive picture for the entire United States, the MPP established guidelines for sample submissions from the DEA regional laboratories. All port-of-entry (POE) exhibits are MPP eligible; however, submissions are limited to a specified number of exhibits based on POE seizure location. For non-POE exhibits, regional laboratories will limit MPP submissions to the first "n" seizures received each month (the number "n" varies by laboratory) that meet the established criteria for MPP analysis. The exhibit must contain methamphetamine in solid form as the primary drug (tablets are excluded), with a purity greater than or equal to 10%. For exhibits meeting the criteria, a 3 gram exemplar of non-composite material is removed for MPP analysis. In addition, all laboratories submit one exemplar of finished product from each domestic clandestine laboratory seizure.

METHAMPHETAMINE SYNTHETIC ROUTE CLASSIFICATIONS

Based on the data collected from various analytical techniques, samples are classified by route of synthesis as follows:

REDUCTIVE AMINATION (RA): samples containing impurities and markers related to the use of P2P as a precursor in a reductive amination reaction

PHOSPHORUS-IODINE: samples indicating pseudoephedrine or ephedrine as the precursor, containing organic and inorganic impurities related to a reaction utilizing various forms of iodine and phosphorus (elemental iodine and phosphorus, hydroiodic acid, hypophosphorus acid)

METAL HYDROGENTATION: samples indicating pseudoephedrine or ephedrine as the precursor, containing organic and inorganic impurities related to a reaction utilizing a chlorinating agent such as thionyl chloride, hydrogen gas, and a catalyzing agent such as platinum or palladium.

MIXED ROUTE: samples containing synthetic markers from two or more different manufacturing routes are determined to have a mixed route

UNKNOWN: samples void of the impurity information needed to establish a manufacturing route, usually high-purity methamphetamine samples

BACKGROUND INFORMATION

ESSENTIAL CHEMICALS FOR METHAMPHETAMINE PRODUCTION VIA REDUCTIVE AMINATION

Synthesis of methamphetamine via a reductive amination synthetic route remains the dominant observation of domestically seized exemplars undergoing analysis in the Methamphetamine Profiling Program. As such, the Special Testing and Research Laboratory has compiled a listing of what are considered essential chemicals needed to manufacture methamphetamine in this manner. While not all-inclusive of every chemical needed in the manufacturing process, the following list offers guidance as to which essential chemicals are likely to be found at a clandestine site.

Phenyl Acetone (P2P, BMK)	**Methylamine**	**Phenylacetic Acid**
Formic Acid	**Tartaric Acid**	**N-methyl formamide**
Sodium (or Potassium) **Cyanide**	**Benzyl Chloride** (or Bromide)	**Benzyl Alcohol**
Lead Acetate	**Ammonium Chloride**	**Benzyl Cyanide**
Formaldehyde (formylin 37% solution)	**Methyl Thioglycolate** (MTG)	**Azobisisobutyronitrile** (AIBN)