

# PHARMCHEK®

DRUGS OF ABUSE SWEAT PATCH



# THE BETTER, CLEANER, AND SMARTER OPTION TO DETECT DRUGS OF ABUSE.



- ✓ Tamper evident
- ✓ Increased window of detection
- ✓ Acts as a deterrent to drug use
- ✓ Variable removal date
- ✓ Reliable
- ✓ Hygienic alternative to urine testing
- ✓ Tests for both the drug metabolite and parent drug
- ✓ Cannot be diluted
- ✓ Cost effective
- ✓ 7 - 10 days of wear time
- ✓ Retains drugs used any time during wear period
- ✓ Continuous monitoring; 24 hours a day, 7 days a week



The PharmChek® Drugs of Abuse Sweat Patch by PharmChem allows continual monitoring of your drug-dependent clients. The solid construction of the patch ensures that any tampering is visibly evident.



### **SUPERIOR DETECTION**

Two-step verification of positive results, plus parent drug and metabolite detection.



### **CONTINUOUS ACCOUNTABILITY**

A single patch provides 24-hour sample collection for 7–10 days.



### **PRIVACY WITHOUT COMPROMISE**

Be confident in your results without invading anyone's privacy.



## ABOUT PHARMCHEK®

The PharmChek® Sweat Patch acts as a collector for nonvolatile components of sweat, including drugs of abuse. It consists of an adhesive plastic film that holds a pad in place against the skin.

The adhesive film of the patch is a semipermeable barrier that allows oxygen, carbon dioxide, and water vapor to pass through so that the skin can breathe normally. Larger molecules (such as drugs) are trapped in the absorption pad portion of the patch. Contaminants from the environment cannot penetrate the adhesive barrier from the outside, so the patch can be worn during normal activities, including bathing, swimming and athletics.



## USAGE

The Sweat Patch is worn on the upper arm, (lower midriff and lower back are alternative sites). The skin where the patch will be worn is thoroughly and aggressively cleaned with alcohol pads to remove dirt, oil and dead skin cells prior to application. The Sweat Patch should be worn for a minimum of 24 hours to ensure an adequate amount of sweat is collected for testing.

After the patch is worn, the absorption pad is removed and sent with a completed chain-of-custody form to our partner lab to be tested for drugs of abuse. Clinical studies have shown that drugs and drug metabolites contained in the pad are stable for days at room temperature, and months in a freezer. The Sweat Patch is tamper-evident when applied correctly. A unique number is imprinted on each patch to aid with chain-of-custody identification. The Sweat Patch is also gender-neutral and eliminates the need for same-sex observations.

## ANALYSIS

Once the pad is received at the lab, any drugs present are washed from it into an extraction solvent and tested by assays similar to those used for testing urine samples.

Immunoassay technology is currently used for the screening test. A positive screening test is confirmed by LC-MS/MS (Tandem Liquid Chromatography/ Mass Spectrometry).

# PANELS

Confidently detect the most common drugs of abuse, with additional panels available for common opioids. Each PharmChek® patch is screened by our partner SAMHSA-Certified lab, via immunoassay, with presumptive positives confirmed by LC-MS/MS.

PharmChek® Standard Panel			
Screening	Cutoff	Confirmation	Cutoff
Methamphetamine, Sweat	10 ng/mL	MS Methamph, Sweat MS Amphetamine, Sweat	10 ng/mL
Amphetamine, Sweat	10 ng/mL	Amphetamine, Sweat	2.0-9.9 ng/mL PRESENT 10.0 ng/mL POSITIVE
Opiates, Sweat	10 ng/mL	MS, Codeine, Sweat MS, Morphine, Sweat MS 6-AM, Sweat MS Hydrocodone, Sweat MS Hydromorphone, Sweat	10.0 ng/mL 10.0 ng/mL 10.0 ng/mL 10.0 ng/mL 10.0 ng/mL
Cocaine Metabolite, Sweat	10 ng/mL	MS Cocaine/Metab, Sweat MS Cocaine, Sweat	2.0-9.9 ng/mL PRESENT 10.0 ng/mL POSITIVE
PCP, Sweat	7.5 ng/mL	MS PCP, Sweat	7.5 ng/mL
THC, Sweat	0.8 ng/mL	MS THC, Sweat	0.5 ng/mL
Fentanyl Add-On			
This panel cannot be purchased independently of the Standard Panel			
Fentanyl, Sweat	1 ng/mL	MS Fentanyl, Sweat MS Norfentanyl, Sweat	1 ng/mL 1 ng/mL

## PharmChek® Expanded Panel

Screening	Cutoff	Confirmation	Cutoff
Amphetamine, Sweat	10 ng/mL	MS Amphetamine, Sweat	2.0-9.9 ng/mL <small>PRESENT</small> 10.0 ng/mL <small>POSITIVE</small>
Methamphetamine, Sweat	10 ng/mL	MS Methamph, Sweat MS Amphetamine, Sweat	10.0 ng/mL
Benzodiazepines, Sweat	2.0 ng/mL	MS 7-Aminoclonazepam, Sweat MS Oxazepam, Sweat MS Nordiazepam, Sweat MS Lorazepam, Sweat MS Clonazepam, Sweat MS Alprazolam, Sweat MS, Triazolam, Sweat MS, Temazepam, Sweat MS Diazepam, Sweat	1.0 ng/mL 1.0 ng/mL 1.0 ng/mL 1.0 ng/mL 1.0 ng/mL 1.0 ng/mL 1.0 ng/mL 1.0 ng/mL 1.0 ng/mL
Buprenorphine, Sweat	1.0 ng/mL	MS Buprenorphine, Sweat MS Norbuprenorphine, Sweat	0.5 ng/mL 0.5 ng/mL
Cocaine Metabolite, Sweat	10 ng/mL	MS Cocaine/Metab, Sweat MS Cocaine, Sweat	2.0-9.9 ng/mL <small>PRESENT</small> 10.0 ng/mL <small>POSITIVE</small>
Fentanyl, Sweat	1 ng/mL	MS Fentanyl, Sweat MS Norfentanyl, Sweat	1 ng/mL 1 ng/mL
Methadone, Sweat	5.0 ng/mL	MS Methadone, Sweat	5.0 ng/mL
Opiates, Sweat	10 ng/mL	MS Codeine, Sweat MS Morphine, Sweat MS 6-AM, Sweat MS Hydrocodone, Sweat MS Hydromorphone, Sweat	10.0 ng/mL 10.0 ng/mL 10.0 ng/mL 10.0 ng/mL 10.0 ng/mL
OXYC/OXYM, Sweat	10 ng/mL	MS Oxycodone, Sweat MS Oxymorphone, Sweat	10.0 ng/mL 10.0 ng/mL
PCP, Sweat	7.5 ng/mL	MS PCP, Sweat	7.5 ng/mL
THC, Sweat	0.8 ng/mL	MS THC, Sweat	0.5 ng/mL



# COURT PROFESSIONAL FACTS

“The patch ... is used widely in the criminal justice system because of its perceived advantages over other forms of drug testing.”

U.S. v. Meyer, 483 F.3d 865 (8th Cir. 2007) (O'Connor, J.)

For over three decades, the PharmChek® Drugs of Abuse Sweat Patch has played a critical role in our country's court system. Through its 24/7 continuous wear time, the PharmChek® Drugs of Abuse Sweat Patch deters drug use, makes detecting drug use more efficient and economical than other forms of drug testing, and provides confidence to justice professionals.

This Court Professional Facts section highlights questions commonly asked by judges, attorneys, supervision officers, and other justice professionals with reference to answers provided by federal and state courts using the reliable technology.

## What is the PharmChek® Drugs of Abuse Sweat Patch?

In Meyer, retired Associate Justice of the United States Supreme Court Sandra Day O'Connor, explained, "The sweat patch, which is marketed by PharmChem, Inc., is composed of an absorbent pad and an outer membrane. After the skin is cleaned with alcohol, the patch is applied to the wearer[], and the absorbent pad collects the wearer's sweat, over a period of a week or more. . . . The [wearer]'s sweat wets the pad, the water in the sweat eventually evaporates through the non-occlusive membrane, and any drugs remain in the absorbent pad. Once the sweat patch is removed from the [wearer], it is returned to PharmChem for analysis."

**483 F.3D AT 866 (INTERNAL CITATION OMITTED).**

## In what areas of the criminal justice system is the PharmChek® Drugs of Abuse Sweat Patch utilized?

Courts across the United States use the PharmChek® sweat patch for pretrial supervision, probation and parole, drug courts, and child protection proceedings.

**SEE, E.G., IN RE MADISON T., 970 N.W.2D 122 (NEB. CT. APP. 2022); U.S. V. ALFONSO, 284 F. SUPP. 2D 193 (D. MASS. 2003); U.S. V. ZUBECK, 248 F. SUPP. 2D 895 (W.D. MO. 2002).**

The National Association of Drug Court Professionals Best Practice Standards recognize "recent studies have begun to examine other testing methods in Drug Courts, including sweat patches..."

**SEE NADCP BEST PRACTICE STANDARDS, VOL. II, 28-29, 31 (2018).**

## Is the PharmChek® Drugs of Abuse Sweat Patch novel technology?

Courts regularly rely on the Food and Drug Administration's (FDA) clearance of the sweat patch dating to 1990, as an indicator of its reliability.

**SEE MEYER, 483 F.3D AT 866; U.S. V. BENTHAM, 414 F. SUPP. 2D 472, 474 (S.D.N.Y. 2006); U.S. V. FENIMORE, NO. 98-00018-04, 2003 WL 23374632 (W.D. MO. AUG. 29, 2003).**

The sweat patch is generally accepted in the field of toxicology.

**SEE COMMONWEALTH V. HALL, NO. 925 MDA 2018, 2019 WL 1579630 (PA. SUPER. CT. APR. 12, 2019) (CITING FRYE V. U.S., 293 F. 1013 (D.C. CIR. 1923)).**





## Is the PharmChek® Drugs of Abuse Sweat Patch subject to peer-reviewed academic studies?

In admitting results into evidence, courts regularly cite to the dozens of peer-reviewed academic studies that support its reliability.

**SEE MEYER, 483 F.3D AT 869 (“THE PEER-REVIEWED ACADEMIC STUDIES THAT HAVE BEEN CONDUCTED GENERALLY SUPPORT THE DEVICE’S RELIABILITY.”); BENTHAM, 414 F. SUPP. 2D AT 473 (“MOST OF THE STUDIES THUS FAR SUPPORT THE RELIABILITY OF THE SWEATPATCH TEST AS A METHOD FOR DETECTING DRUG USE.”); U.S. V. STUMPF, 54 F. SUPP. 2D 972, 973 (D. NEV. 1999) (THE SWEAT PATCH “HAS BEEN THE SUBJECT OF SEVERAL PEER REVIEW ARTICLES AND THE TECHNIQUE OF TESTING FOR THE PRESENCE OF DRUGS IN THE HUMAN BODY THROUGH EXCRETIONS OF PERSPIRATION HAVE BEEN GENERALLY FOUND TO BE RELIABLE.”)**

**FOR A COMPLETE LIST OF RESEARCH ARTICLES, PLEASE VISIT [WWW.PHARMCHEK.COM/RESOURCES/RESEARCH-ARTICLES](http://WWW.PHARMCHEK.COM/RESOURCES/RESEARCH-ARTICLES).**

## Have courts determined the PharmChek® Drugs of Abuse Sweat Patch test results are reliable and admissible?

Hundreds of courts have ruled the results are reliable and admissible. In an opinion by retired Associate Justice of the United States Supreme Court Sandra Day O’Connor, the United States Court of Appeals for the Eighth Circuit recognized, “The patch ... is used widely in the criminal justice system because of its perceived advantages over other forms of drug testing, e.g., its non-invasiveness, resistance to intentional adulteration, and ability to detect drug-use over relatively long periods.”

**MEYER, 483 F.3D AT 866.**

**FOR A COMPLETE LIST OF SUCH CASES, PLEASE VISIT [WWW.PHARMCHEK.COM/RESOURCES/COURT-CASES](http://WWW.PHARMCHEK.COM/RESOURCES/COURT-CASES).**

## Can PharmChek® Drugs of Abuse Sweat Patch test results be used for sentencing purposes?

In U.S. v. Gatewood, 370 F.3d 1055, 1061 (10th Cir. 2004), vacated on other grounds, 543 U.S. 1109 (2005), the court held sweat patch results are admissible for sentencing purposes because the PharmChem laboratory report had “sufficient indicia of reliability to support its probable accuracy.” In U.S. v. Gragg, 95 F.3d 1154 (7th Cir. 1996), the court affirmed a sentence based on the showing that PharmChem’s results are “accurate and its techniques thorough and proper.”

## Is there a chain of custody process for the PharmChek® Drugs of Abuse Sweat Patch?

Courts have approved of the extensive chain of custody procedures implemented for the PharmChek® Drugs of Abuse Sweat Patch. In U.S. v. Yang, No. 3:14-cr-00069, 2021 WL 4304705 (D. Alaska Sept. 1, 2021), the court considered PharmChem's chain of custody training, information collected, methodology and protocol of specimen collection, specimen security, consent and certification forms, shipping, testing procedures, and results reporting to admit the test results as reliable.

All individuals applying and removing the PharmChek® Drugs of Abuse Sweat Patch must be trained in the chain of custody procedures, which ensure the integrity of the sweat patch from the moment it is placed on a person's body to the time it is tested at the laboratory.

**FOR A DETAILED DESCRIPTION OF THE CHAIN OF CUSTODY PROCEDURES, PLEASE VISIT [WWW.PHARMCHEK.COM/PATCH-EDUCATION](http://WWW.PHARMCHEK.COM/PATCH-EDUCATION).**



## **Does the PharmChek® Drugs of Abuse Sweat Patch have advantages over urine drug tests?**

In *Alfonso*, 284 F. Supp. 2d at 196, the court noted, “The sweat patch presents two main advantages over the urine tests that have traditionally been employed to detect drug use. First, the sweat patch poses fewer intrusions on the offender’s privacy and schedule. An offender wearing a sweat patch need not be monitored as he urinates, nor must he face random urine tests that may interfere with his work schedule. Instead, he can simply come into the Probation Office on a scheduled basis for removal of his patch and application of a new one. Second, the sweat patch has the potential to provide a more accurate picture of an offender’s drug use. Whereas a urinalysis is essentially a snapshot that provides a picture of drug use over a 72-hour period, the sweat patch is worn continuously. In addition, because of the widespread usage of the urine tests, techniques and products have been developed to ‘beat’ them through dilution, adulteration and substitution, thus further undermining the accuracy of urine tests.” (internal citation omitted).



## What drugs are detected by the PharmChek® Drugs of Abuse Sweat Patch?

The expanded panel detects Cocaine, Morphine, Codeine, Amphetamine, Marijuana, Phencyclidine, Hydromorphone, Hydrocodone, Fentanyl, Norfentanyl, Oxycodone, Oxycodone, Benzodiazepines, Methadone, Buprenorphine, and Norbuprenorphine. The standard panel detects Cocaine, Morphine, Codeine, Amphetamine, Marijuana, Phencyclidine, Hydromorphone, and Hydrocodone. There is also a fentanyl add-on available for the standard panel, which detects Fentanyl and Norfentanyl.

## Can different forms of drug testing yield different results?

It is possible for someone to test positive on one form of drug testing and negative on another form of testing. Courts recognize that certain doses of a drug might not be detected in urine or hair, for example, but detected in sweat. In *Fenimore*, the court explained, “the Court finds that Defendant’s negative hair test, even if reliable, does not conflict with the positive sweat patch. For example, controlled dosing studies have demonstrated that low doses of a drug may be insufficient to be detected in hair.”

**2003 WL 23374632, AT \*3; SEE ALSO U.S. V. WILSON, NO. 91-CR-124, 1995 WL 324541 (N.D. ILL. MAY 26, 1995).**

Every form of drug testing, whether for blood, urine, hair, saliva, or sweat, establishes a laboratory cut-off level to measure the presence of drugs of abuse. Laboratory cut-off levels establish confidence if the result is positive for a certain drug. A positive result on one form of testing and a negative result on another form of testing does not mean one is a false positive or the other is a false negative.

**FOR MORE INFORMATION ON THE TESTING METHODS AND CUTOFF LEVELS, PLEASE VISIT [WWW.PHARMCHEK.COM/RESOURCES/UNDERSTANDING-SWEAT-PATCH-RESULTS](http://WWW.PHARMCHEK.COM/RESOURCES/UNDERSTANDING-SWEAT-PATCH-RESULTS)**



## Will passive or inadvertent exposure to a drug cause a positive test result on the PharmChek® Drugs of Abuse Sweat Patch?



The absorption pad within the patch is protected from the environment by a layer of film composed of polyurethane coated with adhesive. Studies involving this concern were conducted by applying drugs to the exterior of the patch and collecting and analyzing the absorption pad. No metabolites were found in these experiments.

Courts have rejected arguments that a positive test resulted from environmental exposure or contamination to drugs. Among the rejected arguments include secondhand inhalation of smoke; contact with clothing or bed sheets; contact with currency; contact with drug users while dancing, clubbing, and beach partying; and intimate contact with a drug user.

**U.S. V. CORONA, NO. 097-31(3) (MJD/AJB), 2007 WL 4531475 (D. MINN. DEC. 19, 2007); BENTHAM, 414 F. SUPP. 2D AT 472; FENIMORE, 2003 WL 23374632, AT \*3; ZUBECK, 248 F. SUPP. 2D AT 895.**

## References

*Commonwealth v. Hall*, No. 925 MDA 2018, 2019 WL 1579630 (Pa. Super. Ct. Apr. 12, 2019)

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*In re Madison T.*, 970 N.W.2d 122 (Neb. Ct. App. 2022)

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*U.S. v. Alfonso*, 284 F. Supp. 2d 193 (D. Mass. 2003)

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*U.S. v. Bentham*, 414 F. Supp. 2d 472 (S.D.N.Y. 2006)

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*U.S. v. Corona*, No. 097-31(3) (MJD/AJB), 2007 WL 4531475 (D. Minn. Dec. 19, 2007)

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*U.S. v. Fenimore*, No. 98-00018-04-CR-W-ODS, 2003 WL 23374632 (W.D. Mo. Aug. 29, 2003)

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*U.S. v. Gatewood*, 370 F.3d 1055 (10th Cir. 2004), vacated on other grounds, 543 U.S. 1109 (2005)

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*U.S. v. Gragg*, 95 F.3d 1154 (7th Cir. 1996)

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*U.S. v. McCormick*, 54 F.3d 214 (5th Cir. 1995)

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*U.S. v. Meyer*, 483 F.3d 865 (8th Cir. 2007) (O'Connor, J., Ret., sitting by designation)

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*U.S. v. Stumpf*, 54 F. Supp. 2d 972 (D. Nev. 1999)

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*U.S. v. Wilson*, No. 91-CR-124, 1995 WL 324541 (N.D. Ill. May 26, 1995)

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*U.S. v. Yang*, No. 3:14-cr-00069-SLG-DMS, 2021 WL 4304705 (D. Alaska Sept. 1, 2021)

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*U.S. v. Zubeck*, 248 F. Supp. 2d 895 (W.D. Mo. 2002)

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National Association of Drug Court Professionals, Best Practice Standards, vol. II, at 28-29, 31 (2018)

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**For a complete list of court cases, please visit**

[www.pharmchek.com/resources/court-cases](http://www.pharmchek.com/resources/court-cases)

**For a complete list of research articles, please visit**

[www.pharmchek.com/resources/research-articles](http://www.pharmchek.com/resources/research-articles)



## FREE TO DIRECT AGENCIES

PharmChem has partnered with CourtFact®, a leading client management platform, to offer direct agencies a complimentary software solution to better manage PharmChek® sweat patch testing.

### **TAKE ADVANTAGE OF THIS OFFER TODAY!**

We will coach you through the small program modifications you can make to harness the power of importing lab results and reports, getting notifications of completed lab tests, and using test result data analytics on-demand.

Contact your PharmChek® Account Representative today to schedule an introduction to this exciting new solution.

 **817-591-4115**

 **[customersupport@pharmchem.com](mailto:customersupport@pharmchem.com)**



## FEATURES

- ✓ Log sample barcodes, photos, CoC's, or other files
- ✓ Dashboard to view the stage of each client's patch
- ✓ Batch track the shipping of patches sent to the lab
- ✓ Multiple standard reports to view result information
- ✓ Automatically import results & laboratory reports
- ✓ Even more features being added throughout 2024

**THIS  
STINKS.**



# THIS DOESN'T.



Call or email to learn more, or use your smartphone to scan the QR code to visit [pharmchek.com](http://pharmchek.com).



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