

# **Non-Invasive Testing** Saliva, Stool, and Urine

**Assessing Hormone Dynamics,** 

Gastrointestinal Health,

Bone Density,

and Toxic Metals and Elements

# About DiagnosTechs™

Established in 1987, DiagnosTechs Laboratory is the leading international saliva-based testing and research laboratory. In 1989, DiagnosTechs was the first laboratory to introduce saliva-based hormone testing into routine clinical practice, creating a powerful tool for evaluating stress and hormone-related disease. In 1995, DiagnosTechs added saliva- and stool-based gastrointestinal and food sensitivity testing.

DiagnosTechs continues to refine and improve our testing standards, using cutting edge technology and methods. In addition, DiagnosTechs offers other non-invasive testing options such as urine testing for bone health and urine / saliva testing for toxic metals and elements.



#### **Panel:**



#### **Toxic Metals and Elements Panels**

The DiagnosTechs Toxic Metals and Elements Panels (TME) use accurate, noninvasive salivary and urinary testing to measure 36 different metals and elements to assess potentially harmful

levels of toxic metals and other elements that can accumulate over time.



#### **Tests Included:**

#### **TME** Includes:

#### **Urinary and Salivary Metals and Elements**

- Aluminum Antimony Arsenic Barium Beryllium
- Cadmium Calcium Cesium Chromium Cobalt
- Copper Gadolinium Iron Lead Lithium
- Magnesium Manganese Mercury Molybdenum
- Nickel Palladium Phosphorous Platinum
- Rubidium Selenium Silver Strontium Thallium
- Thorium Tin Titanium Tungsten Uranium
- · Vanadium · Zinc · Zirconium



## **Adrenal Stress Index Panel**

The ASI was first introduced in 1989 to evaluate hormonal stress markers. Since that time, several tests have been added to

measure glycemic control, immune status, and gluten sensitivity.
This comprehensive panel is ideal for patients under chronic stress with known or suspected endocrine abnormalities.



#### **ASI** Includes:

TAP Temporal Adrenal Profile - Cortisol Rhythm (4 Cortisol measurements - Morning, Noon, Afternoon, Midnight)\*

**DHEA** Dehydroepiandrosterone & Dehydroepiandrosterone sulfate (DHEA & DHEA-S)\*

ISN Fasting and Non-Fasting Insulin (2 measurements)\*

P17-OH 17-OH Progesterone\*

FI-4 Gluten (Gliadin) Ab, sIgA\*

MB2S Total Salivary slgA\*



## **Bone Health Panel**

Bone metabolism involves a continuous process of simultaneous deposition and breakdown. By providing measurements of six key hormones in saliva, as well as the bone metabolism marker

Pyrilinks-D in urine, the BHP can help to evaluate and monitor patients at risk of developing osteoporosis.



#### **BHP** Includes:

**DPD** Pyrilinks-D\*\*\* (deoxypyridinoline)

**DHEA** Dehydroepiandrosterone & Dehydroepiandrosterone sulfate (DHEA & DHEA-S)\*

E2 Estradiol\*

P1 Progesterone\*

TTF Testosterone\*

**CORT** Morning and Midnight Cortisol (2 measurements)\*

FSH Follicle Stimulating Hormone (FSH)\*



# **Cycling Female Hormone Panel**

The FHP is a dynamic mapping of estradiol and progesterone throughout one menstrual cycle. This panel also includes cycle averages for testosterone and DHEA & DHEA-S. Saliva samples are collected every 2-3 days over the monthly cycle. The expanded version of this panel (eFHP) also includes seven FSH and LH measurements around the time of ovulation without the need for additional collections. Both the FHP and eFHP provide valuable information on the dynamics of a woman's cycle at any age during the cycling years.

#### **FHP** Includes:

**DHEA** Dehydroepiandrosterone & Dehydroepiandrosterone sulfate (DHEA & DHEA-S) (cycle average)\*

TTF Testosterone (cycle average)\*

Estradiol (x11)\*

P1 Progesterone (x11)\*

**eFHP** Includes all FHP tests plus:

FSH Follicle Stimulating Hormone (FSH) (x7)\*

**LH** Luteinizing Hormone (LH) (x7)\*

#### **Panel:**



### **Peri and Post Menopause Hormone Panels**

The PeriM/PostM Panels, and their expanded versions (ePeriM/ ePostM), provide measurements of six key hormones: progesterone, estradiol, estrone, estriol, testosterone, and DHEA & DHEA-S.

The expanded panels also measure FSH and LH.

#### **Tests Included:**

#### PeriM/PostM Includes:

**DHEA** Dehydroepiandrosterone & Dehydroepiandrosterone sulfate (DHEA & DHEA-S)\*

TTF Testosterone\*

E1 Estrone\*

**E2** Estradiol\*

**E3** Estriol\*

**P1** Progesterone\*

#### ePeriM/ePostM

Includes all PeriM/PostM tests plus:

**FSH** Follicle Stimulating Hormone (FSH)\*

LH Luteinizing Hormone

(LH)\*

(**Note:** The PostM/ePostM panels involve a single collection, whereas the PeriM/ePeriM panels involve two collections, typically two weeks apart.)



#### **Male Hormone Panel**

Many men experience an age-related decline in testosterone, frequently referred to as andropause. The MHP assesses testosterone, dihydrotestosterone, progesterone, DHEA &

DHEA-S, androstenedione, and estrogens. The expanded version of this panel also measures FSH and LH.



#### **MHP** Includes:

**DHEA** Dehydroepiandrosterone & Dehydroepiandrosterone sulfate (DHEA & DHEA-S)\*

**AND** Androstenedione\*

TTF Testosterone\*

**DHT** Dihydrotestosterone\*

Estrone\* **E1** 

**E2** Estradiol\* **P1** Progesterone\*

#### **eMHP** Includes all MHP tests plus:

**FSH** Follicle Stimulating Hormone (FSH)\*

LH Luteinizing Hormone (LH)\*

FP

# **Food Panel**

Immune-mediated food sensitivities often present clinically as gastrointestinal symptoms, fatigue, and skin manifestations.

In other cases, these reactions are clinically silent, although their long term effects can still be significant.



#### **FP** Includes:

FI-1 Cow's Milk (Casein) Ab, slgA\*

Soy Protein Ab, slgA\* FI-2

FI-3 Egg (Ovalbumin) Ab, slgA\*

Gluten (Gliadin) Ab, slgA\*

MB2S Total Salivary slgA\*



# **Gastrointestinal Health Panels**

The prevalence of gastrointestinal complaints in general practice is significant. Screening for many common GI issues can be achieved using the Gastrointestinal Health Panel. This is a 15- or 22-parameter analysis that non-invasively evaluates gastrointestinal function and health status using both stool and saliva specimens.

# Calprotectin

Fecal calprotectin levels have a high sensitivity and specificity for differentiating between IBD and IBS. This test can help clinicians to determine whether invasive procedures such as endoscopy are warranted, and can help to monitor IBD treatment efficacy.

\*\*Stool \*\*\*Urine \*Saliva

#### **GI-1** Includes:

Yeast Culture\*\*

Ova and Parasites (x2)\*\*

**Bacterial Stool Culture\*\*** 

**GP3Cd** C. difficile Toxins A&B\*\*

GP4 Giardia Antigen\*\*

GP5 Cryptosporidium Antigen\*\*

**GP7S** Entamoeba histolytica Ab, slqA\*

GP8S Helicobacter pylori Ab, IgG\*

Total Intestinal slgA\*\* MB2

Lysozyme\*\* MB3

MB4 Alpha Anti-Chymotrypsin\*\*

FI-4

Gluten (Gliadin) Ab, slgA\*

FG1 Chymotrypsin\*\*

FG4 Occult Blood\*\*

FG5 Fecal pH\*\*

#### **GI-02** Includes all GI-1 tests plus:

FI-1 Milk (Casein) Ab, slgA\*

Soy Protein Ab, slgA\* FI-2

Egg (Ovalbumin) Ab, slgA\*

GP6S Toxoplasma gondii Ab, slgA\*

T-SOL Taenia solium Ab, slgA\*

ASC Ascaris spp. Ab, slgA\*

TRIC Trichinella spp. Ab, slgA\*

CAL Calprotectin\*\* (add on)

# Pioneering Technology From Research to Laboratory

DiagnosTechs continues to refine and improve our testing standards, using cutting-edge technology and methods. We employ several gold standard mass spectrometry technologies for quantification of a variety of clinically important analytes.

Our precision instrumentation includes gas and liquid chromatography tandem mass spectrometry (GC-MS/MS and LC-MS/MS) for sensitive and exact molecular identification, matrix-assisted laser desorption ionization time-of-flight (MALDI-TOF) mass spectrometry for quick and comprehensive identification of microorganisms, and inductively coupled plasma mass spectrometry (ICP-MS/MS) for trace level analysis of heavy metals and other clinically relevant elements.

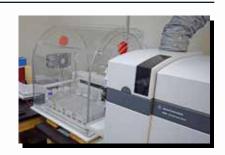


- SALIVA RESULTS IN 5-7 DAYS
- STOOL RESULTS IN 7-10 DAYS

#### **ICP-MS/MS**

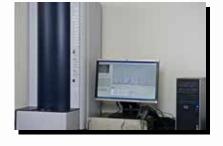
Our Inductively Coupled Plasma Tandem Mass Spectrometer (ICP-MS/MS) provides DiagnosTechs the ability to perform elemental analysis in clinical specimens with unparalleled accuracy, precision, and detection.

The ICP-MS/MS platform allows for trace level analysis in complex matrices with minimal sample preparation by employing the reaction mode capability of the Agilent 8800 Triple Quad. DiagnosTechs currently is developing and validating methods for a comprehensive suite of tests for heavy metals and other clinically relevant elements in saliva, urine, and blood. Future prospective metals panels also include analyses of hair and nails.



#### **MALDI-TOF Mass Spectrometry**

Available in only 10% of clinical laboratories in the US, this unit offers the most accurate microbial identification available, with the capability of identifying more than 4000 microorganisms - 100 times the number identifiable by standard methods. This process requires a fraction of the time required for standard culturing methods, providing you with much faster and more comprehensive results. DiagnosTechs is one of the only noninvasive reference laboratories to offer this level of accurate, rapid microbial identification.



#### Gas Chromatography - Triple Quadrupole Mass Spectrometer (GC-MS/MS)

The GC-MS/MS allows us to measure trace amounts of volatile organic compounds like steroid hormones and other small molecules. The instrument's sensitivity allows for quantification of the low levels of hormones seen in saliva. With the triple quad's ability to absolutely identify a compound, we offer an unparalleled confidence in our test results. DiagnosTechs also uses the mass spectrometer to develop our immunoassays, ensuring the utmost accuracy in a wide range of tests.



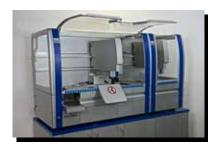
#### Liquid Chromatography - Triple Quadrupole Mass Spectrometer (LC-MS/MS)

The LC-MS/MS also allows for the quantification of small molecules as well as peptides with minimal sample preparation. This makes the mass spectrometer efficient and extremely well suited for biomarker research and hormone analysis. Our research and development team is now able to quantify thyroid hormones as well as large proteins like thyroid stimulating hormone (TSH) and B-type natriuretic peptide (BNP) with an accuracy that is seen only using triple quad mass spectrometers.



#### **Polymerase Chain Reaction (PCR)**

DiagnosTechs' addition of PCR technology ensures we are at the forefront of emerging testing applications. PCR recognizes DNA and RNA sequences, offering a way to accurately and rapidly detect pathogens otherwise not readily cultured or visualized, as well as identifying clinically relevant genetic markers or mutations. This technology also gives DiagnosTechs the ability to identify the presence of common resistance genes without the need for culture, quickly providing the information you need to prescribe an effective treatment for your patients.



#### **Xantus and Hamilton Liquid Handling Systems**

DiagnosTechs uses strict quality control procedures to monitor sample handling, data gathering, and results reporting. To meet the processing requirements of the high volume of patient samples we receive, the Xantus and Hamilton liquid handling systems are used to rapidly and accurately transfer precise amounts of clinical samples and testing components.



#### The VITEK® 2 ID/AST

This unit utilizes the latest advancements to provide an accurate, rapid susceptibility report. This technology is the fastest method available to check for susceptibility of bacteria. With the accuracy of this identification system, our microbiology laboratory is able to quickly provide effective antibiotic choices based on bacterial sensitivity and resistance information.



#### Ova and Parasite (O&P) Testing

DiagnosTechs' O&P testing method relies on immunoassays in addition to conventional microscopy methods. Our parasitology department uses the most advanced microscopes available, and our parasitologists are highly trained in parasite, yeast, and host cell identification.



# The Science of Laboratory Medicine







**Founded in 1987, DiagnosTechs** is a pioneer and leader in saliva-based testing. Our commitment to assisting healthcare professionals in restoring patient health and wellness is unsurpassed, with over 1.2 million specimens tested per year.

Saliva testing is a powerful and convenient tool for serial evaluations of endocrine responses to stress, hormone-related disease, and other health conditions. DiagnosTechs continually improves and refines our laboratory testing standards using cutting-edge technology and methods.



DiagnosTechs™, Inc. 840 S 333rd Street Federal Way, WA 98003 USA 800.878.3787

www.diagnostechs.com

©2023 DiagnosTechs, Inc. All rights reserved

