

# Noninvasive Testing Saliva, Stool, and Urine

Adrenal Stress Index
Female Hormones
Male Hormones
Gastrointestinal Health
Food Sensitivity
Bone Health
Flexi-Matrix Custom Panels

# About DiagnosTechs<sup>™</sup>

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

DiagnosTechs continues to refine and improve testing standards, using cutting edge technology and methods. DiagnosTechs tests are considered the platinum standard for salivary testing worldwide. In addition, DiagnosTechs offers other noninvasive laboratory testing such as stool testing for digestive health and urine testing for bone health.



# DiagnosTechs™ Test Panels



#### Adrenal Stress Index Panel (ASI)

The ASI was first introduced in 1989 to evaluate endocrine measures of stress, a contributing factor to morbidity and mortality. Since that time, several tests have been added to give more complete information

regarding adrenal hormone metabolism, glycemic control, immune status, and gluten sensitivity. This comprehensive panel is an ideal evaluation for patients under chronic stress with known or suspected endocrine abnormalities.



#### **ASI** Includes:

**TAP** Temporal Adrenal Profile (Cortisol Rhythm -

Morning, Noon, Afternoon, Bedtime)\*

**DHEA** Dehydroepiandrosterone & Dehydroepiandrosterone

sulfate (DHEA & DHEA-S)\*

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

P17-OH 17-OH Progesterone\* Gluten (gliadin) Ab, slgA\* FI-4

MB2-S Total salivary slgA\*



#### **Bone Health Panel (BHP)**

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 helps 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 Bedtime Cortisol (2 measurements)\*

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



#### Calprotectin

Calprotectin is a highly abundant cytoplasmic protein present in granulocytes. 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.



#### **CAL** Includes:

CAL Calprotectin\*\*



#### **Cycling Female Hormone Panel (FHP)**

The FHP is a dynamic mapping of the free-fraction levels of estradiol and progesterone throughout one menstrual cycle. This panel also includes cycle averages for free testosterone and DHEA & DHEA-S.

Saliva samples are collected every 2-3 days over the monthly menstrual 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:

Dehydroepiandrosterone & Dehydroepiandrosterone sulfate

(DHEA & DHEA-S) (pooled value)\*

TTF Testosterone (pooled value)\*

**E2** Estradiol (x11)\* Progesterone (x11)\*

#### eFHP Includes all FHP tests plus:

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

LH Luteinizing Hormone (LH) (x7)\*



## Food Panel (FP)

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 may still be significant. The Food Panel (FP) measures antibodies to four common food allergens-gluten (gliadin), milk (casein), egg (ovalbumin), and soy (protein). It also includes a measurement of the total salivary slgA to provide context for interpreting the food specific slgA results.



#### FP Includes:

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

FI-2 Soy (protein) Ab, slgA\*

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

FI-4 Gluten (gliadin) Ab, slgA\*

MB2-S Total salivary slgA\*

\*\*\*Urine

#### **Gastrointestinal Health Panels** (GI-1 & GI-2)

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 noninvasively evaluates gastrointestinal function and health status using both stool and saliva specimens.



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

CS<sub>1</sub> Stool culture for yeast\*\* GP<sub>2</sub> Ova and Parasites (x2)\*\* GP3 Bacterial stool culture, enteric pathogens\*\* GP3Cd Clostridium difficile toxins A&B\*\* GP4 Giardia lamblia antigen\*\*

GP5 Cryptosporidium antigen\*\* GP7-S Entamoeba histolytica Ab, slgA\* GP8-S Helicobacter pylori Ab, IgG\*

MB<sub>2</sub> Total intestinal slgA\*\* Lysozyme\*\* **MB3** 

MB4 Alpha 1-antichymotrypsin\*\* Gluten (gliadin) Ab, slgA\* FI-4 FG1 Chymotrypsin\*\* FG4 Occult Blood\*\* Fecal pH\*\* FG5

#### GI-2 Includes all GI-1 tests plus:

FI-1 Milk (casein) Ab, slgA\* Soy (protein) Ab, slgA\* FI-2 FI-3 Egg (ovalbumin) Ab, slgA\* GP6-S Toxoplasma gondii Ab. slgA\* Taenia solium (tapeworm) T-SOL

Ab, slgA\*

**ASC** Ascaris lumbricoides (roundworm) Ab, slgA\*

Trichinella spiralis Ab, slgA\* **TRIC** 

# MHP

PHP

GI

#### Male Hormone Panel (MHP)

Many men experience an age-related decline in testosterone. frequently referred to as andropause. The MHP assesses testosterone and dihydrotestosterone (DHT); the precursor

hormones progesterone, DHEA & DHEA-S, and androstenedione; and

estrogens. The expanded version of this panel also measures the pituitary regulatory hormones FSH and LH.



#### **MHP** Includes:

**DHEA** Dehydroepiandrosterone &

Dehydroepiandrosterone sulfate (DHEA & DHEA-S)\*

**AND** Androstenedione\* TTF Testosterone\* DHT Dihydrotestosterone\*

E1 Estrone\* **E2** Estradiol\* Progesterone\*

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

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

Luteinizing Hormone (LH)\* LH

# **Peri and Post Menopause Hormone Panels** (PeriM & PostM)

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. Additionally, combining these panels with an ASI can provide a more complete

assessment of the impact of stress on hormonal fluctuations in the end-of-cycle age groups.



#### PeriM/PostM Includes:

**DHEA** Dehydroepiandrosterone & Dehydroepiandrosterone

sulfate (DHEA & DHEA-S)\*

Testosterone\* TTF E1 Estrone\*

F2 Estradiol\* **E3** Estriol\*

**P1** Progesterone\*

#### ePeriM/ePostM

Includes all PeriM/PostM tests plus:

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

Luteinizing Hormone (LH)\* LH

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



#### Flexi-Matrix™

Flexi-Matrix<sup>™</sup> allows you to combine more than one panel (except BHP, FHP/eFHP, PeriM/ePeriM, CHO, DCT, & TFP/ TMP). Flexi-Matrix™ kits are the most economical way of

customizing test panels and profiles to meet your clinical needs, saving you a 20-70% volume discount off individual test fees. See our test and fee schedule for more information.

# 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.



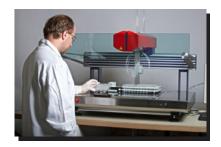
#### **Polymerase Chain Reaction (PCR)**

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







At DiagnosTechs, our team of medical advisors are available to assist you with questions you may have about laboratory testing and the assessment of test results.

The physicians employed by DiagnosTechs collectively represent decades of experience spanning a wide range of medical specialties. In addition to their work evaluating the meaning of laboratory test results, our physicians create and share educational materials specifically tailored for our medical providers and for the general public. Our Medical Support team's emphasis is placed on researching current medical topics and evidence-based materials that support testing with the goal of enhancing provider relations and enabling better patient outcomes.



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