**OXIDATIVE STRESS**

The body maintains a delicate balance between the presence of free radicals working to oxidize toxic compounds, and its own antioxidant defense systems. When this balance is upset, a condition known as Oxidative Stress results, indicated by the appearance of lesions on cell walls and membranes. If unchecked, Oxidative Stress can lead to accelerated aging, and to a greatly increased risk of disease.

### Areas of interest and some applications of the d-ROMs test

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<th>Some application</th>
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<td>Rheumatology</td>
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<td>Cardiology and angiology</td>
<td>Heart failure, angiitis, chronic renal disease, and diabetes.</td>
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The earliest possible diagnosis of Oxidative Stress, at the onset of cellular damage, is now available with the Win Os Manager.

### Scientific Validation of FRAS 4 Evolvo

Supported by over 600 scientific references.

### PAT test

- The PAT test is **precise**, **reliable**, and **repeatable** for measuring both scavengers and antioxidant, haematic concentrations.
- A small drop of blood, taken from the fingertip, is all that is required to perform a PAT test.

### d-ROMs test

The d-ROMs test measures the haematic concentration of ROM (“Reactive Oxygen Metabolism; Free Radicals”), an excellent indicator of stress, and is **precise**, **reliable**, and **repeatable**.

### The Italian CINI (National Research Center) has confirmed that the results of a d-ROMs test, and the results of an ESR test (“Electron Spin Resonance”, which is the gold standard) are, in fact, interchangeable.

### Test results are expressed in U CARR, the measuring unit of Free Radicals now adopted by the international scientific community.

- A small drop of blood, taken from the fingertip, is all that is required to perform a d-ROMs test.

### Win Os Manager

- The interpretation of both the d-ROMs and PAT test must be performed by a medical practitioner. We recommend Win Os Manager software as an aid to the diagnosis of Oxidative Stress. In addition, Win Os Manager.

### FEATURES

- Performs risk assessment.
- Saves and files test results.
- Calculates the date to begin a regimen of vitamins and antioxidants, where appropriate.
- Highlights the date for the next Oxidative Stress check-up.
- Prints custom reports for both doctor and patient.

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FRAS 4 Evolvo

H&D’s FRAS 4 Evolvo performs a global assessment of Oxidative Stress using a d-ROMs test to assess free radicals (hydroperoxides), and a PAT test to assess antioxidants, both tests recognized as standards by the international scientific community.

Cared out in real time, these tests allow a single medical provider, or a large scale health care organization, to diagnose Oxidative Stress with tremendous reliability and precision.

In addition, H&D’s FRAS 4 Evolvo assesses pro and antioxidant compounds independently.

For the first time, the physician can now monitor the real efficacy of antioxidant treatment, balance and optimize therapy, and just as importantly, avoid the well documented deleterious effects of antioxidant misuse.

It is important to verify therapeutic intake of antioxidants and to measure their efficacy.

SCIENTIFIC VALIDATION OF FRAS 4 Evolvo

Supported by over 600 scientific references

WHAT IS THE H&D’S FRAS 4 Evolvo AVAILABLE TO?
The H&D’s FRAS 4 Evolvo is available to both doctors, and health care organizations.

WHAT IS IT DESIGNED TO DO?
The H&D’s FRAS 4 Evolvo performs a global evaluation of oxidative stress by performing and assessing both the d-ROMs, and PAT tests.

HOW DIFFICULT IS IT TO USE?
The H&D’s FRAS 4 Evolvo, with its dedicated photometer, and built in centrifuge, enables the operator to carry out d-ROMs and PAT tests in a simple, step by step manner, guided by clear prompts on the operating display. The built in printer is capable of printing a “ticket” with patient’s name, doctor’s name and address, results, and date of testing. Software updates, and additional tests, when available, are downloaded through a USB port.

CANDIDATES AND AIMS OF d-ROMs test

CANDIDATES

EXAMPLES

Healthy, clinically asymptomatic, subjects, without any risk factors for OS*

All the apparently healthy peoples.

Subjects exposed to radiation sources, & their family members.

Subjects exposed to radiation sources, & their family members.

Subjects exposed to environmental pollutants, & their family members.

Surgically treated children, as well as parents.

Subjects with psychic trauma, & their family members.

Subjects with psychic trauma, & their family members.

Subjects with chronic diseases.

Subjects with chronic diseases.

Subjects with eating disorders.

Subjects with eating disorders.

Subjects with severe fractures.

Subjects with severe fractures.

Subjects with autoimmune diseases.

Subjects with autoimmune diseases.

Subjects with mitochondrial diseases.

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Subjects with Down’s syndrome, etc.

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CANDIDATES

EXAMPLES

Healthy, clinically asymptomatic, subjects, with one or more risk factors for OS*

All the apparently healthy peoples.

Subjects exposed to radiation sources, & their family members.

Subjects exposed to radiation sources, & their family members.

Subjects exposed to environmental pollutants, & their family members.

Surgically treated children, as well as parents.

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CANDIDATES

EXAMPLES

Subjects with Down’s syndrome, other cancers, etc.

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