Mitochondrial function is crucial for cellular metabolism, survival and energy generation. Impaired mitochondrial respiration is associated with pathological conditions such as cancer, ischemic reperfusion damage and neurodegenerative diseases. Mitochondrial toxicity is also a common reason for safety-related drug attrition and withdrawal.

The MitoXpress Xtra Oxygen Consumption Assay allows real-time measurement of the oxygen consumption of whole cells or isolated mitochondria and is a reliable method to assess cellular respiration for metabolic characterization and also to evaluate toxic effects of treatments on mitochondrial function in a high-throughput format.

- Convenient plate reader based measurement of oxygen consumption
- Simple mix-and-measure protocol for direct measure of mitochondrial function and cell metabolism
- Study effects of;
  - various treatments
  - genetic modifications
  - respiration and mitochondrial function
- Directly evaluate mitochondrial toxicity of drug treatments
**MitoXpress Xtra Oxygen Consumption Assay**

- Applicable in a wide range of in vitro models:
  - Adherent and Suspension cells
  - Permeabilised cells
  - Isolated mitochondria or enzymes
  - 3D-cultures
  - Bacteria, yeasts and moulds
- Simple "mix-and-measure" protocol allows multiparametric analysis with a range of other assay kits, for example the pH-Xtra Glycolysis Assay.
- Reversible, making transient and fast changes in oxygen consumption observable.

The major advantage of using kits is that they are designed for use with most fluorescence plate readers and standard 96- and 384-well microtitre plates!

- NO in lab waiting time for specialised equipment to become available and NO capital expenditure required

**MitoXpress Xtra Oxygen Consumption Assay**

**MX-200-4 Kit Component Details**

<table>
<thead>
<tr>
<th>Component</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MitoXpress Xtra</td>
<td>4 Vials</td>
<td>Oxygen sensing probe</td>
</tr>
<tr>
<td>reagent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS mineral oil</td>
<td>4 Dropper Bottles</td>
<td>Sample sealing to avoid oxygen back-diffusion</td>
</tr>
</tbody>
</table>

**REFERENCES**