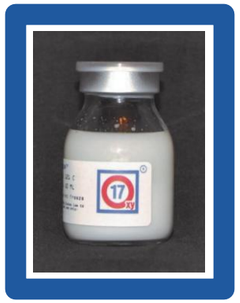
OXY-17® AVAILABILITY

Oxy-17® Gas is approved for human use in the United States and European Union, and has been commercially available for more than 20 years. Oxy-17® Gas is sold in 5L, 10L and larger volumes.

Oxy-17® Fusion is in regulatory marketing approval studies for human use in Germany (EU) and the United States. However, it is available in a 50mL vial for research use in animal models and approved investigator studies. Smaller volume prefilled syringes are in development.

OXY-17® FORMULATIONS



Oxy-17® Fusion: a patented formula delivering Oxy-17® Gas to target tissue intravenously in the form of a proprietary perfluorocarbon emulsion.

Oxy-17® Gas: an enriched form of the naturally available Oxygen-17 gas.

ABOUT ROCKLAND TECHNIMED LTD.

Oxy-17® is a patented technology developed by Rockland Technimed Ltd. (RTL), pioneers in real-time metabolic magnetic resonance imaging. Oxy-17® Fusion, RTL's lead preclinical candidate, is the first, ready-to-use intravenous formulation of Oxygen-17 and will be commercialized by RTL and Nukem Isotopes GmbH, a global leader in providing isotopes in form of ultra-pure substances.

REFERENCES/CREDITS

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2. McCommis KS, He X, Abendschein DR, Gupte PM, Gropler RJ, Zheng J. Cardiac ^{17}O MRI: toward direct quantification of myocardial oxygen consumption. *Magn Reson Med*. 2010 Jun;63(6):1442-7. 2011;701:215-22
3. Oxy-17® MRI of Human Brain Tissue Mass; Reprinted with permission from: Atkinson IC, Thulborn KR Feasibility of mapping the tissue mass corrected bioscale of cerebral metabolic rate of oxygen consumption using 17-oxygen and 23-sodium MR imaging in a human brain at 9.4 T. *Neuroimage*. 2010 Jun;51(2):723-33. DeLaPaz R, Gupte P. Potential Application of ^{17}O MRI to Human Ischemic Stroke. *Adv Exp Med Biol*.
4. Direct 17O MRI with partial volume correction: first experiences in a *glioblastoma patient*, Magn Reson Mater Phy, published online April 1, 2014

RocklandTechnimed,Ltd
PIONEERS IN MRI TISSUE VIABILITY IMAGING

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A Novel **Metabolic** Magnetic Resonance **Imaging** Medium

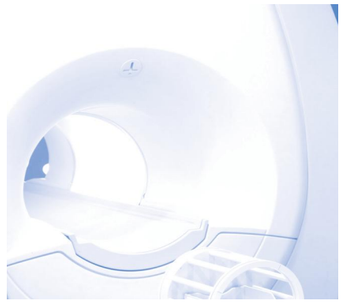
Elevating MRI to a Real-time Monitor of Cell Health

RocklandTechnimed,Ltd
PIONEERS IN MRI TISSUE VIABILITY IMAGING

A Novel Metabolic Magnetic Resonance Imaging Medium

Elevating MRI to a Real-time Monitor of Cell Health

DISCOVER OXY-17®



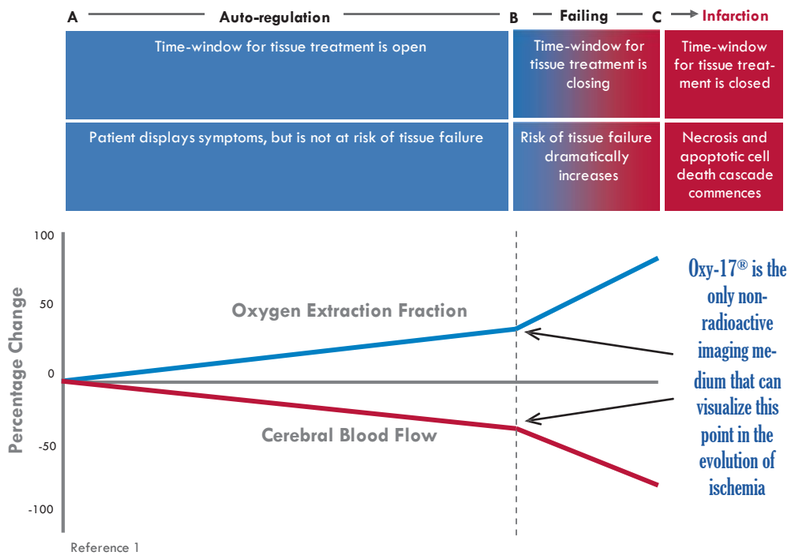
Oxy-17® is the only non-radioactive imaging medium to measure real-time oxygen metabolism, oxygen extraction fraction and molecular oxygen consumption using an unaltered clinical magnetic resonance imaging scanner.

Oxygen-17 is a stable, naturally occurring, **non-radioactive isotope of oxygen** with identical chemical properties to Oxygen-16, the predominant oxygen isotope in the air. Because Oxygen-17 is a normal component of the oxygen we breathe, it naturally participates in all normal cellular metabolic processes. However, unlike Oxygen-16, Oxygen-17 has a unique net 5/2 spin property to its nucleus which interacts with the proton (H) when converted to metabolic water ($H_2{}^{17}O$) via oxidative respiration. This interaction can be detected using standard, unmodified MRI proton coils and software (T2W or T1p pulse sequences) enabling clinicians and researchers to **measure cellular oxygen metabolism at 1mm spatial resolution** (using proton MRI). The only other method for imaging oxygen metabolism is ^{15}O PET, which uses the radioactive isotope Oxygen-15 and yields a 6mm spatial resolution. Oxy-17® offers higher resolution imaging and can be used in repeat tests without the dose limitations associated with radioactive imaging methods, such as ^{15}O PET.

TISSUE VIABILITY ASSESSMENT WITH OXY-17®

Different levels of cell injury have corresponding rates of oxygen uptake from the blood (oxygen extraction fraction, OEF) in order to maintain viable levels of oxygen respiratory metabolism: Oxygen-starved ischemic or hypoxic tissue extracts a larger percentage of oxygen than normal tissue while nonviable (necrotic) tissue does not take up any $^{17}O_2$ gas and hence does not produce detectable water ($H_2{}^{17}O$). Conventional MRI used with **Oxy-17® can distinguish hypoxic but viable regions** from those in which cell death has occurred due to necrosis and apoptosis.

Oxy-17®: A Real-time Monitor of the Evolution of Ischemia



Reference 1

Oxy-17®: Versatile Metabolic MRI Medium with Vast Clinical Potential

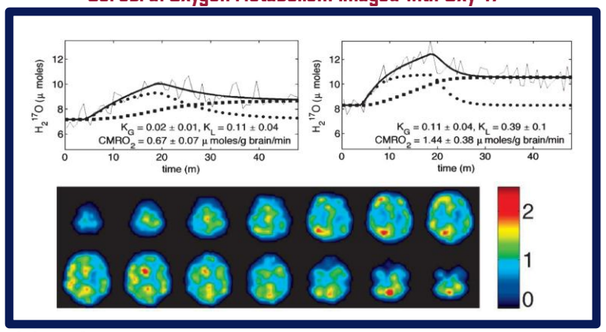
CEREBRAL & CARDIAC ISCHEMIA

Oxy-17® MRI can enable physicians to rapidly **assess tissue viability**, extend the treatment window and make better informed treatment decisions. Unlike gadolinium or iron oxide-based MRI contrast agents, Oxy-17® can **cross an intact blood brain barrier** to image normal and ischemic cerebral oxygen metabolism ($CMRO_2$). In addition, an Oxy-17® MRI can measure myocardial oxygen metabolism (MRO_2).

Quantification of Cardiac Ischemia

Reference 2

Cerebral Oxygen Metabolism Imaged with Oxy-17®



Reference 3

More than 38% contrast observed after a bolus venous injection of the Oxy-17® Fusion versus normal control image

EPILEPSY

An Oxy-17® MRI can **pinpoint the seizure focus** based on reduced interictal oxygen metabolism, enabling physicians to plan surgical resection more accurately.

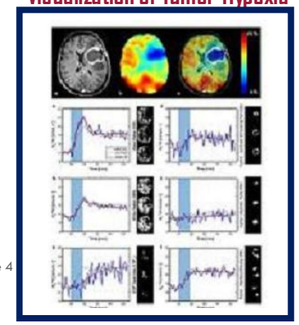
DRUG DISCOVERY

Oxy-17® can be used as a consistent non-invasive biomarker for an investigative compound's mechanism of action at the cellular level and provide **a surrogate end point** for clinical trials starting from drug discovery thru clinical use. Oxy-17® can also serve as a companion diagnostic to personalize treatment by more specifically **targeting treatable tissue**.

ONCOLOGY

Molecular oxygen levels in neoplastic (cancerous) tissues fluctuate based on the tumor grade and level of oxidative vs. anaerobic metabolism. An Oxy-17® MRI can **safely track oxygen metabolism changes in tumor tissue** before and throughout the course of treatment without exposing the patient to additional radiation.

Visualization of Tumor Hypoxia



Reference 4