Overview:

Oxidation as a technical process is a confusing term because it is the process of binding an oxygen-like atom into the fatty acid. The image to the right is eliostearic-acid which is rich in unsaturated bonds available to host selenium molecules.

If these bonds are occupied with oxygen the lipid is considered oxidized with oxygen or rancid. The term “rancid” only refers to as a lipid oxidized with oxygen.

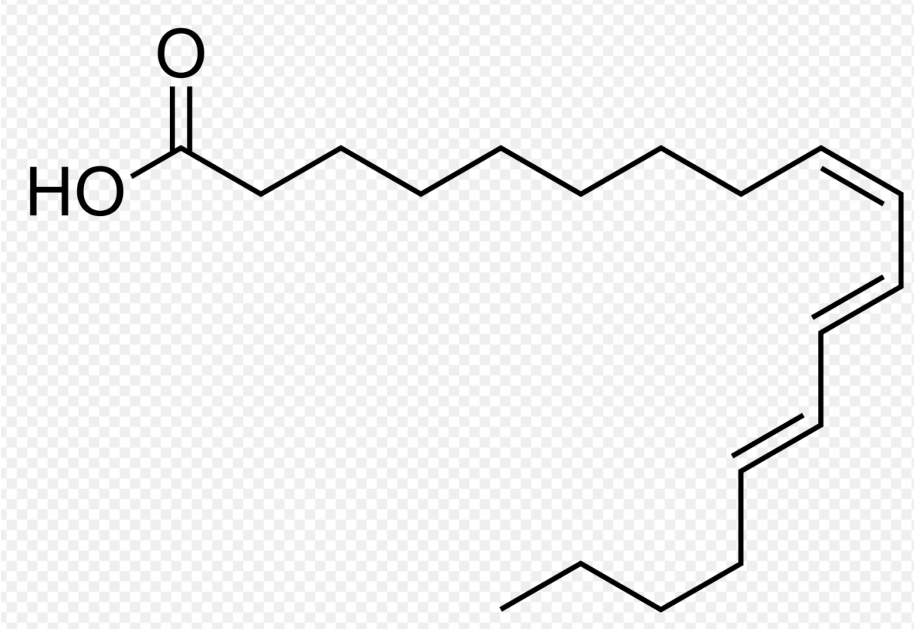
Our bodies sense rancid lipids to enable avoidance. Foods with rancid lipids taste “off”. Our palates recognize that the lipid is no longer suitable as a *bulk* food, meaning that the lipid is no longer suitable as a healthy building material for healthy cells.

Revici discovered that oxidized lipids are used by sick cells. He used this effect to selectively

deliver nutrients to sick cells including sulfur, selenium, and other therapeutic agents. Lipid selenium uses this method which is why it is branded as “Smart Selenium”, and why it has near-immediate remediation effects on metabolic and toxic issues.

When the bonds are reacted with elements similar to oxygen the lipid is considered oxidized but the oxidation is with a chalcogen:

- oxidized – reacted with oxygen
- sulfated – reacted with sulfur
- selenated – reacted with selenium

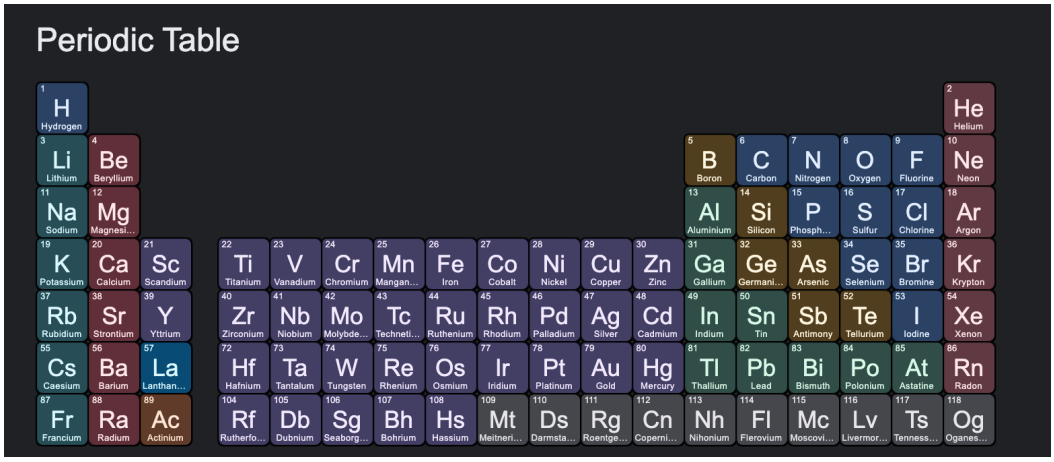


Eliostearic Acid

What is a chalcogen?

A fatty acid can be “oxidized” with any chalcogen, in this case Oxygen, Sulfur, Selenium or even Tellurium. Chalcogens are the elements in the 8 column under O in the periodic table.

Elements in any column participate similarly in chemical reactions. Reactions that affect column 8 are called oxidation reactions because oxygen is the leading and most common element in the column.


Periodic Table
1 H Hydrogen
2 He Helium
3 Li Lithium
4 Be Beryllium
5 B Boron
6 C Carbon
7 N Nitrogen
8 O Oxygen
9 F Fluorine
10 Ne Neon
11 Na Sodium
12 Mg Magnesi...
13 Al Aluminium
14 Si Silicon
15 P Phosph...
16 S Sulfur
17 Cl Chlorine
18 Ar Argon
19 K Potassium
20 Ca Calcium
21 Sc Scandium
22 Ti Titanium
23 V Vanadium
24 Cr Chromium
25 Mn Mangan...
26 Fe Iron
27 Co Cobalt
28 Ni Nickel
29 Cu Copper
30 Zn Zinc
31 Ga Gallium
32 Ge Germani...
33 As Arsenic
34 Se Selenium
35 Br Bromine
36 Kr Krypton
37 Rb Rubidium
38 Sr Strontium
39 Y Yttrium
40 Zr Zirconium
41 Nb Niobium
42 Mo Molybde...
43 Tc Techneti...
44 Ru Ruthenium
45 Rh Rhodium
46 Pd Palladium
47 Ag Silver
48 Cd Cadmium
49 In Indium
50 Sn Tin
51 Sb Antimony
52 Te Tellurium
53 I Iodine
54 Xe Xenon
55 Cs Caesium
56 Ba Barium
57 La Lanthan...
72 Hf Hafnium
73 Ta Tantalum
74 W Tungsten
75 Re Rhenium
76 Os Osmium
77 Ir Iridium
78 Pt Platinum
79 Au Gold
80 Hg Mercury
81 Tl Thallium
82 Pb Lead
83 Bi Bismuth
84 Po Polonium
85 At Astatine
86 Rn Radon
87 Fr Francium
88 Ra Radium
89 Ac Actinium
104 Rf Rutherfo...
105 Db Dubnium
106 Sg Seaborg...
107 Bh Bohrium
108 Hs Hassium
109 Mt Meitneri...
110 Ds Darmsta...
111 Rg Roentge...
112 Cn Coperni...
113 Nh Nihonium
114 Fl Flerovium
115 Mc Moscovi...
116 Lv Livermor...
117 Ts Tenness...
118 Og Oganes...

What is oxidation?

The term “oxidation” is technically confusing because it generally describes binding of any group 8 agent (chalcogen) with a fatty acid. A fatty acid can be oxidized with oxygen, sulfur, selenium or tellurium. Binding of the chalcogen into the fatty acid oxidizes the lipid. Once bounds, the oxidizer is permanently and irreversibly bonded to the fatty acid.

Once the oil oxidizes the oxidizing agent, oxygen, sulfur or selenium is permanently bonded into the fatty acid. The oxidized molecule is locked into the fatty acid until the fatty acid is broke apart in a metabolic reaction by a pathogenic or distressed cell.

What is rancid?

A rancid oil is oxidized with oxygen. The term “rancid” applies when an unsaturated food-oil like olive oil binds literal oxygen.

When an unsaturated lipid binds to oxygen, it becomes rancid. The oxygen in the oil changes the odor, taste and viscosity of the food oil to unpleasant.

Most people will reject the flavor or odor of an oxidized lipid because it doesn’t taste or smell good. This sense is the body’s natural way of rejecting or avoiding the detrimental health effects of consuming rancid lipids. Many food oils exposed to oxygen over extended periods will become rancid by combining with oxygen.

Why are rancid oils generally not good for health?

Dr Emmanuel Revici discovery that “oxidized” oils preferentially target and enter pathogenic cells. This phenomenon explains why consuming rancid oils as food products is bad for your health. Rancid oils preferentially feed sick cells. This explains the dietary guidance to avoid high-temperature cooking with unsaturated fats. Unsaturated fats can oxidize. Saturated fats do not have oxidation sites so they are better for cooking.

Remember however that “rancid” oils are oxidized with oxygen – not sulfur or selenium.

Consuming foods rich in oxidized oils preferentially provide feedstock for pathogenic tissue. This is why consumption of rancid oils or foods is bad.

What is oxidized with selenium?

The manufacturing process for Selenium oil uses heat to open the bonds in the presence of a high concentration of selenium (and no oxygen) so that selenium intentionally reacts and binds into to the double bonds in the oil.

Selenium oil is fully “oxidized” with selenium. This process is called selenation occurs at very high temperatures to assure that literally all binding-sites in the fatty acid are fully bonded with selenium over many hours of high temperature cooking.

Oxidation with selenium changes the “taste” and odor of the oil to smell sulfur-like, be more viscous, and taste less pleasant. Users may perceive the oil as “rancid” because the oxidation with selenium is very similar to oxidation with oxygen. The process of oxidating the oil changes the taste and smell to be slightly unpleasant.

Can selenated oil become rancid?

No.

Binding of the selenium into the oil uses the oil into a carrier molecule for the selenium. Once the bonding sites are occupied with selenium – they are fully reacted and cannot react with oxygen. This makes it impossible for a selenated oil to become rancid.

How does cellular targeting work?

The oxidized character of the selenated oil carries the selenium to the pathogenic, stress or disease affected cells. The body cannot generally differentiate lipids oxidized with oxygen from those oxidized with sulfur or selenium. Oxidized lipids are only absorbed by pathogenic/distressed cells and red blood cells.

Once the oxidized lipid reaches and enters the pathogenic cell the lipid is metabolized. Breakdown of the oxidized lipid releases the selenium from the oil into the cell.

Once released it works like a form of super-oxygen to breakdown or neutralize a wide range of toxins and to facilitate optimum performance of the cells immune system and to optimize the role of glutathione.

This detoxification explains why selenium generally neutralizes the toxic aspects of:

- Addictive Drugs
- Infectious Agents
- Urushiol sources (Poison ivy/oak/sumac)
- Heavy Metals
- Hypoxia via Injury and remediates pain from injury

Why isn’t lipid-bound selenium toxic like other selenium?

The oil binds the selenium so that it cannot chemically react in the body until after it is released inside a disease or toxin affected cell. The selenium is bound to the lipids during digestion and in the blood. Oxidized lipids do not enter “healthy” cells. This process restricts delivery of the selenium to disease and toxin affected cells, and red blood cells.

Only after the diseased cell breaks down, or metabolizes the oxidized lipid, is the selenium released inside the cell. This prevents the selenium from affecting healthy cells thus avoiding toxicity.

Once a selenated lipid enters a a disease or toxin affected cell the lipid is metabolized by the cell. Use of the lipid releases the selenium to become active.

What does the selenium do inside the diseased cell?

Since selenium is chemically similar to oxygen, but stronger, this reaction frees the selenium to acts like a super-oxygen inside the cell to break down cellular disease agents and toxins.

The process is like super oxygen but is remediated by anti-oxidants like Super oxide dismutase. This enables the disease affected cell to have a stronger healing reaction that it would with oxygen, but as an anti-oxidant managed process. The super-oxygen character of the selenium permits the cell to degrade more toxins and more potent toxins that are normally possible with normal oxygen. This is why selenium is a more potent detoxification and healing agent than just oxygen.

Since the selenium is chemically similar to oxygen, it's reactivity is controlled by the normal anti-oxidant mechanisms in the cell.

Why does selenium oil taste weird?

Selenium oil tastes and smells oxidized because it is oxidized with selenium. The chemical similarity of a rancid oil – oxidized with oxygen, versus an oil oxidized with selenium are chemically very similar.

Individuals who consume selenium oil will taste and smell that it is oxidized. As a result they may perceive it is rancid. This is true because most people cannot distinguish the nature of the oxidation with oxygen, or selenium – except that selenated oil has a garlic-like odor. The taste of selenated oil will normally be mildly pungent or slightly bitter.

This taste is only noticeable at therapeutic doses exceeding 5 drops. Note that the normal Minimum Daily Adult Requirement dosage of selenium is 1 drop every other day. Doses for therapeutic levels can range from 5-30 drops / day depending on dietary advice.

The physiological difference only occurs after the oxidized oil reaches a disease affected cell where the selenium helps to detoxify the cell.

Summary

Revici's discovery was that "oxidized" oils preferentially target and enter pathogenic cells.

The oxidation with selenium transports the selenium nutrient into pathogenic cells – which is the main reason that the selenium oil has the specific metabolic effects on pathogenic cells. When the "selenium" is liberated as the pathogenic cell metabolizes the "oxidized" lipid – the selenium becomes metabolically corrective and is used to break down various toxins which disrupt the cell metabolism.

Selenium aids restoration of normal cell metabolism after cells have been exposed to:

- Addictive Drugs
- Infectious Agents

- Urushiol sources (Poison ivy/oak/sumac)
- Heavy Metals
- Hypoxia via Injury

This mechanism of action explains why selenium reverses addictive chemistry, normalizes metabolism in diseased cells, and breaks down poison-oak toxins which disrupt cell normal oxidative cell metabolism.

The oxidation process makes the selenium oil work.