IPRO317: Ethics Statement

8 May 2009

Overarching Standard Help to make a safe, cheaper, and more effective thermal indicator using silver nanorods to benefit the use of temperature dependent products, including foods and medicines, in order to protect the consumer from unusable products.

1 Law

The team will be knowledgeable of laws that govern the use of thermal indicators and be sure the products works before use is permitted.

- **Pressure** The team may attempt to complete the project before sufficient data is provided.
- **Risk** An unsafe, unusable product will be released to the consumers.
- **Risk** Insufficient data will be obtained by the group which will lead to a product without evidence supporting it.
- **Measure** The team will meet and establish the goals on a regular basis, keeping all members informed of the progress and set-backs of the product.

2 Contracts and Agreements

The team will be sure that the product works to standards promised to the customer before marketing will occur.

Pressure The team may attempt to rush the testing or production of the product.

Risk The team will overlook a vital attribute of the product.

- Risk The team will miss important testing information.
- **Measure** The team will spread tests and lab work amongst several different groups in order to assure the data received is an accurate description of what occurred.

3 Professional Codes of Ethics

The team will know the National Society of Professional Engineers code of ethics and be sure to follow them.

Pressure The team may rush the product to complete it within a limited time span.

- **Risk** The team will rush the product without proper testing, violating the code's policy to "avoid deceptive acts."
- **Risk** The team will feel rushed and use unqualified members to do tasks.
- **Measure** The team will divide tasks according to expertise and be sure that several groups prepare and test the products.

4 Industry Standards

The team will be sure that its product falls within or exceeds the industry standard for thermal indicators and has a minimum amount of failure.

Pressure The product may be rushed through production or testing.

Risk The product will fail to perform to the standards required by the consumer.

- **Risk** The product will fail to meet what it is marketed as.
- **Measure** The members of the team will know how the product works and the specifications for it and the product will not be released without each member agreeing to the standards set forth.

5 Social, Civic, and Geographic Communities

The team will be sure to test the thermal indicator to assure the safety of the community and the consumers who will use it.

- **Pressure** The team may feel obligated to have a product completed by a certain deadline.
- **Risk** The product will not be tested for its environmental risks.
- Risk The product will fail and lead to hazardous conditions to the consumer.
- **Measure** The team will investigate all potential risks in the use of the product before it is released to the public. The team will assign members to investigate such hazards, far before the production is started.

6 Personal Relations

The members of the team will be sure to submit honest data to the other members and stakeholders so as not to invalidate the final product.

- **Pressure** Team members may feel obligate to rush their portions of production or testing.
- **Risk** Team members will feel the pressure of deadlines and rush to complete their individual sections.
- Risk Team members will fabricate evidence to streamline production.
- **Measure** Several team members are assigned to each task with the ability to overlook the evidence of the associates. The team member must then submit his data to a sub-team leader, who in turn, submits to the team leader. This chain of command and the involvement of several members helps to eliminate fraudulent data.

7 Moral and Spiritual Values

The team will be sure not to use, prepare or test the product in any way that may offend one's moral or spiritual views.

Pressure The team may feel rushed in the testing of their products.

- **Risk** The team will feel the need to allow the products to be tested with their team members, thus possibly infringing on one's moral or spiritual values.
- **Risk** The team will require extra meetings which may infringe on an individual's moral or spiritual values.
- **Measure** The team leader will be sure to make all meetings outside the given time blocks optional, and be sure not to force anything upon individuals, who are unable to do such.