

# Laboratory Experiment Proposal Submission

## Experimental Details

**Experiment location:** A127  
**Experiment title:** Reduction of A-FeO<sub>3-x</sub> (A=Sr, Ba, Bi,Ca)  
**Experiment date:** June 6, 2012  
**Experiment contactname:** Efrain Rodriguez  
**Experiment contactphone:** 2402465297  
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## Chemicals Used

<u>Chemical Name</u>	<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>	<u>Special Hazards</u>
Calcium Iron(III) Oxide	2	0	0	NONE
Strontium Iron(III) Oxide	2	0	0	
Barium Iron(III) Oxide	2	0	0	NONE
Bismuth Iron(III) Oxide	2	0	0	NONE
Calcium Hydride	3	4	2	COR
Methanol	1	3	0	NONE

## Reactants and Resulting Samples

<u>Chemical Name</u>	<u>Hazardous?</u>	<u>Known Hazards</u>
Calcium Iron Oxide	N	
Calcium Oxide	N	
Bismuth Iron Oxide	N	
Barium Iron Oxide	N	
Strontium Iron Oxide	N	

## Required Safety Equipment

- Glove Hot
- Glove Neoprene
- Glove Welding
- Lab Coat
- Goggles Welding
- Tongs

## Required Laboratory Equipment

- Balance
- Glovebox
- Xray Diffractometer
- Chamber Furnace
- Vacuum Pump

## Experimental Write Up

A-FeO<sub>3-x</sub> is transferred to the glove box and ground with CaH<sub>2</sub>. The sample is removed, evacuated with a vacuum and sealed in a Pyrex tube. The sample is heated to 500K in the evacuated tube in a chamber furnace. The furnace is naturally cooled to room temperature and the sample is removed. The sample is washed with methanol to remove CaO and excess CaH<sub>2</sub>.

Experimenter Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Lab Responsible Signature: \_\_\_\_\_

Date: \_\_\_\_\_