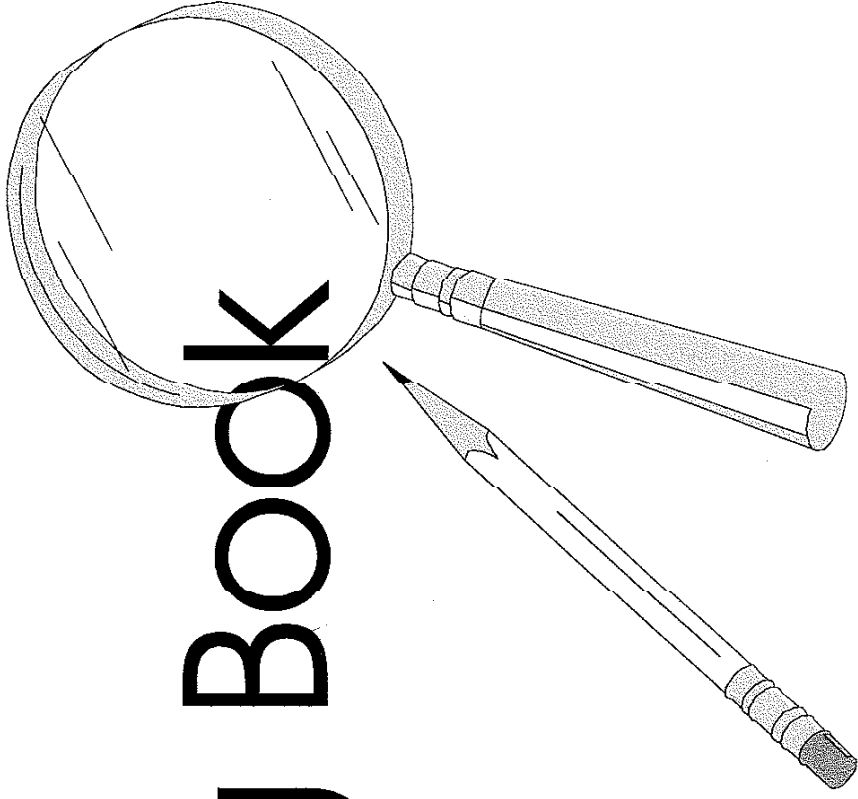


HGS 2003-2004



# Log Book

3 \*

Att: Analysing the problem

Experiment:- Determine the formula of the copper (II) 1,2-diaminocobalt complex by calorimetry.

- A detailed Brochure made using word processor - helps as a guide to this experiment.

Various IT approaches to address the problem

4 - A digital video highlighting the important steps of the experiment, and delivering a lecture on this topic of syllabus.

- A website giving an interactive presentation on internet and

Interactive Multimedia Presentation - available on CD-ROM to the students.

Problem 2:-  
- students can't get accurate results  
- The equipment needs very careful handling for accuracy.  
- Difficult to understand the ligand formation.  
- Using light transmission to get the right concentration.

OR a simple word document explaining all the steps and theory of the experiment.

Date: 8.4.03

## Feasibility study.

The product (IT solution) can be manufactured using 2 possible approaches, such as 2

### → MULTIMEDIA PRESENTATION:-

#### ADVANTAGES

- Interactive - attracts user attention & interest.
- Allows combination of text, video, <sup>clips</sup> images & sound files all at same time.
- Topics can be chosen from the navigation pane, thus the user views the presentation on his pace

#### VIDEO (DIGITAL)

#### ADVANTAGES

- Long lasting interaction
  - User consistency of info provided
  - Sequence of events & movement
  - Keeps people attentive.
- PK 31/12/03

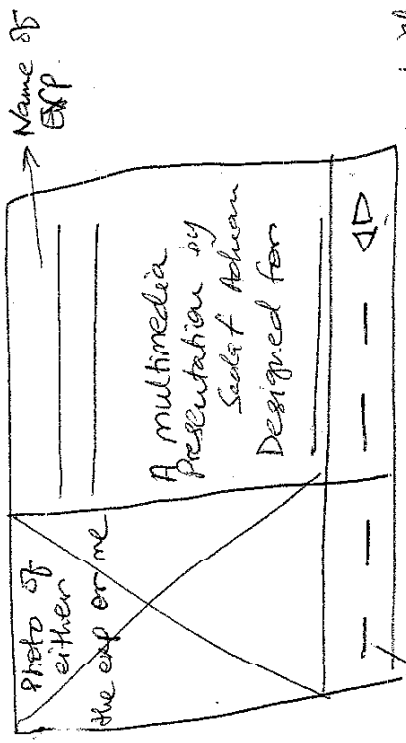
#### DISADVANTAGES

- Takes huge space on computer
- Requires a good quality computer projectors, which are expensive
- The problems with portability - requires complex setup of cables.

#### DISADVANTAGES

- Requires high technical skills for production
- Doesn't allow user to interact with the video.
- Continuously played video is sometimes boring for user.

Contents for the Main Page on Front Page



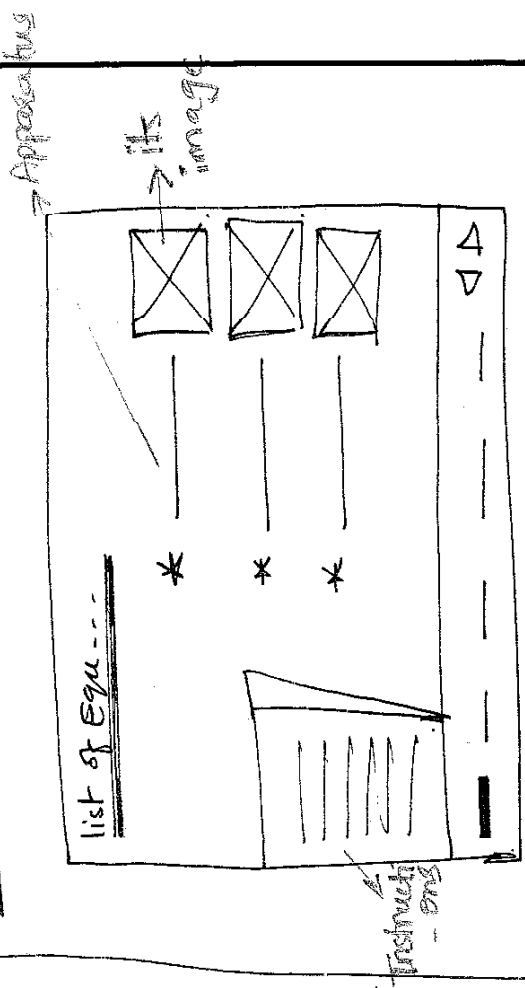
links to other pages

Must include following:

- Page 1 - list of equipment for Exp (with pics)
- Page 2 - Precautionary measures (dos & don'ts of Exp)
- Page 3 - Chemistry background of Exp (theoretical description)
- Page 4 - Procedure of the Experiment in steps
- Page 5 - Visual clip of Experiment
  - Video
  - Animated / still graphs.
- Page 6 - Keywords or Formulas required for the exp.

Date: 20-10-03

PAGE 1 LIST OF EQUIPMENT



For Calorimeter a little bit of detail (not on the page but with a link)

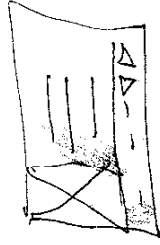
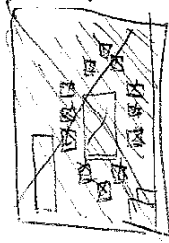


Now & Before the Design eyele looked like

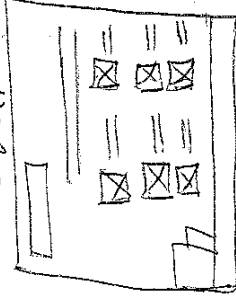
the following

<p><b>Main page</b></p> <ul style="list-style-type: none"> <li>Identifies the user</li> <li>Name of the experiment</li> <li>Determine the formula of the copper (II) 1,2-diaminoethane complex by Colorimeter.</li> <li>An image about the experiment</li> </ul>
<p><b>List of Experiment</b></p> <ul style="list-style-type: none"> <li>Image of all the equipments along the names             <ul style="list-style-type: none"> <li>Colorimeter</li> <li>Volumetric flask</li> <li>2 Birettes</li> <li>Beaker</li> <li>Funnels</li> <li>Measuring cylinders</li> </ul> </li> <li>Brief details of the calorimeter</li> </ul>
<p><b>Procedure</b></p> <p>Procedure of the experiment in steps</p>
<p><b>Visual clip of the experiment</b></p> <ul style="list-style-type: none"> <li>Includes a video clip of the experiment</li> <li>Include an animation of the graph on the right corner moving accordingly with the video</li> <li>As the video finishes the whole graph should come on the screen.</li> </ul>
<p><b>Chemistry knowledge</b></p> <ul style="list-style-type: none"> <li>What are ligands?</li> <li>How they are formed and how the 1,2-diaminoethane ligands are attached to the <math>Cu^{+2}</math> ions.</li> <li>What causes the change in colour of the solution (containing 1,2-diaminoethane and <math>CuSO_4</math>)</li> </ul>
<p><b>Does and don't's</b></p> <ul style="list-style-type: none"> <li>Positioning of the calorimeter</li> <li>Fixed mark on the projector</li> <li>Include pictures of right and wrong</li> </ul>
<p><b>Safety</b></p> <ul style="list-style-type: none"> <li>Safety instructions regarding experiment             <ul style="list-style-type: none"> <li>Wearing goggles</li> <li>Lab coats</li> </ul> </li> </ul>

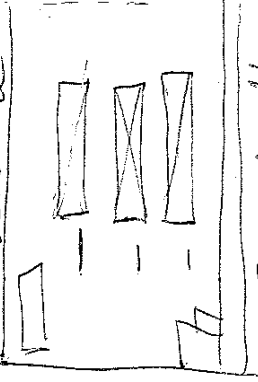
Main page



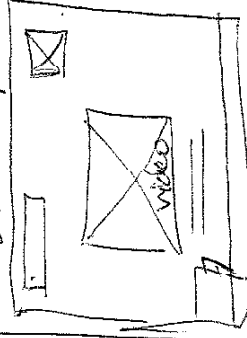
Equipment



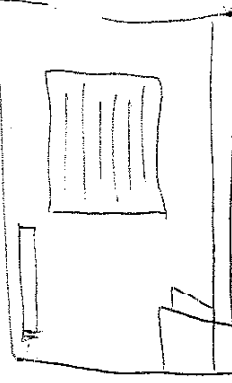
Procedure



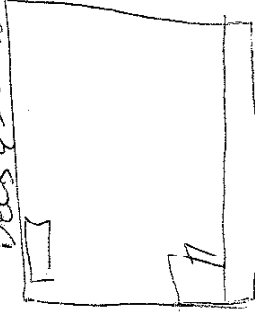
Visual clip



Theoretical know



Does & Don't's



Safety

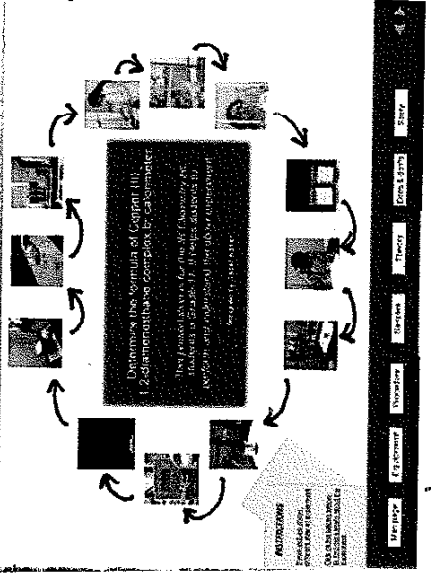


NEW/MODIFIED DESIGN OF THE MAIN PAGE, LISTS OF EQUIPMENT & PROCEDURE

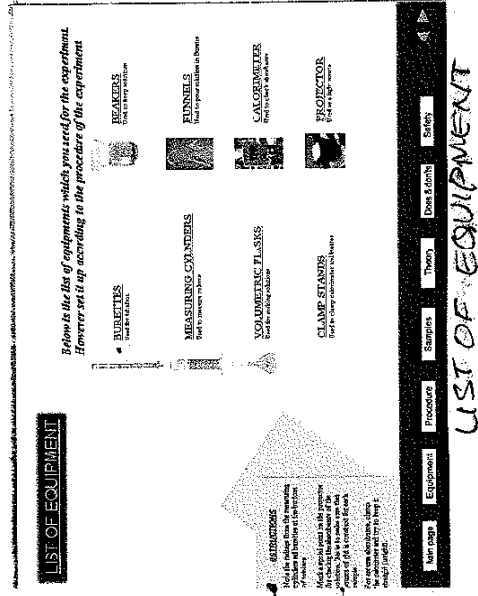
Took snapshots of the modified product.

All pages had buttons on the navigation bar in order to show the link properly. The instruction page, the navigation bars and the heading bars were made more aesthetic, using fire works.

The page show all the steps of the experiment through images and so shows a cycle of steps, the user needs to do.



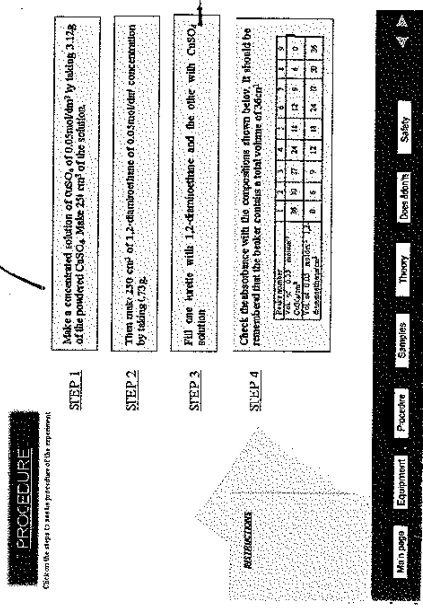
Identifies the users, the experimenter and the producer / designer of the product



Shows more equipments in the page and give a link to them.

Instruction page guides how to take care about a certain equipment while collecting the data

As the user click on STEP 2 OR STEP 1 ..., the hotspot shows the text which is basically the first step of the procedure

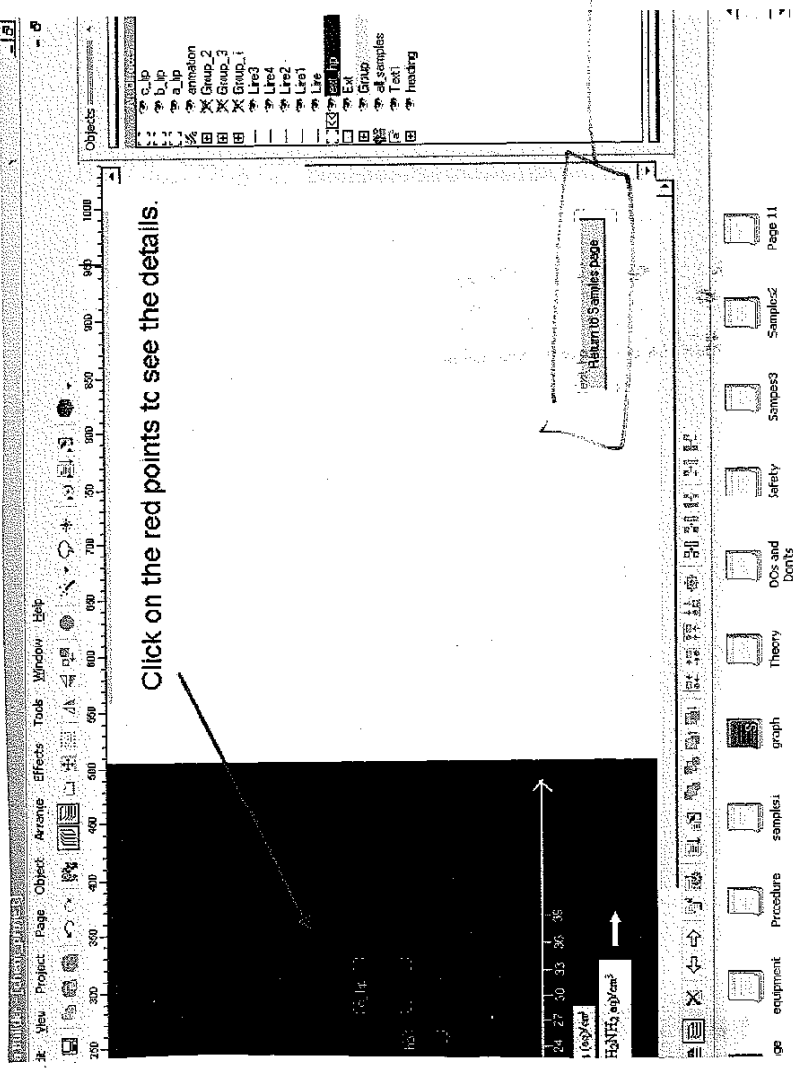


PROCEDURE here the text was put as a bmp image. The reason was, MMS doesn't allow the same formatting of text as MS word.

Date: 25-11-03

45

A Refinement suggested by Matthias Beigmann. an expert in making multimedia presentations and has also studied chemistry at the university level which enabled him to comment on the content.



Click on the red points to see the details.

Initially the button was called as "Return".

But it was changed to "Return to Samples page" because "Exit" button on the page confused the ~~tester~~ tester with exiting the whole presentation.

Date: 2-3-04

3/3/2004