Gravimetric Analysis of a Mixture

Aim: to determine the percentage composition of a *mixture* containing sand, salt and water.

Equipment:

250 mL beaker
Filter funnel, filter paper
Conical flask
Evaporating basin
Bunsen burner
Tripod, gauze
Retort stand, retort ring

Method:

1. Weigh a 250 mL beaker and record mass in data table.
2. Add 100 mL of water to the beaker, a teaspoon of salt and a teaspoon of sand.
3. Stir the mixture until the salt dissolves
4. Weigh the beaker and mixture and record in the data table
5. Weigh a piece of filter paper and conical flash, record in data table.
6. Filter mixture through filter paper into conical flask through filter funnel.
7. Rinse sand to remove excess salt.
8. Leave filter paper to dry out.
9. Once filter paper has dried out, weigh mass and record in data table.
10. Heat sand/water mixture with Bunsen burner until only a small amount of water reaming.
11. Leave overnight to allow remaining water to evaporate.
12. Once all water has evaporated, record mass of conical flask with salt remaining.

Results:

Raw Data

	Object	**Mass (g)**
1	Beaker	
2	Beaker + Mixture	
3	Filter paper	
4	Conical flask	
5	Sand + Filter paper	
6	Conical flask + Salt	

Processed Data

Component	**Mass (g)**	**Percentage Composition**
Sand (5-3)		
Salt (6-4)		
Water (M-S-S)		
Mixture (2-1)		

Discussion:

Discuss the following issues in the experiment and the way they were controlled:

- Validity and Reliability
- Safety