dropped on the slide and is evenly distributed to each layer. A reaction between magnesium and the dye in each layer creates a colour complex . The amount of colored complex formed is directly proportional to the magnesium present. It is now then measured and is read at 600nm (Elin, 1991; Millart *et al*., 1995).

Another regularly used method for serum levels, is the Xylidyl blue method. A color producing reaction occurs between magnesium and Xylidyl blue in an alkaline solution. The intensity of the colour is proportional tothe amount of magnesium present in the sample. By complexion with EGTA, calcium interference with this method is prevented (Samaie *et al*., 2012 and Kundu *et al*., 2013).

1.9 Therapeutic uses of Magnesium

For a very long time, magnesium has been used as a cathartic agent. Furthermore, the relationship between magnesium and cardiovascular diseases had been well studied, and will be extensively discussed below. Generally, magnesium has a well established role in treatment of some types of arrhythmias, specifically torsade de pointes (long QT syndrome), and thus it is used in the treatment of this cardiac disorder. However, magnesium role in other arrhythmias is not clear. Nevertheless, magnesium therapy is still considered in patients with refractory arrhythmias. Furthermore, magnesium is used in cardiac surgery for perioperative arrhythmias prophylaxis although the effectiveness of magnesium here is still unproved (Purvis & Movahed, 1992; Swaminathan, 2003; Geiger & Wanner, 2012).

With a strong evidence supporting its role in pre-eclampsia and eclampsia treatment, magnesium is used in these pregnancy disorders. Despite having no evidence to