

**VISVESWARAIAH TECHNOLOGICAL UNIVERSITY,  
BELGAUM.**



B.L.D.E.Association's  
**VACHANA PITAMAHA Dr P.G.HALKATTI COLLEGE OF  
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**DEPARTMENT OF ELECTRONICS AND COMMUNICATION  
ENGINEERING.**  
(Accredited by NBA)

**A PROJECT REPORT ON  
“INFUSION SYSTEM”**

**BACHELOR OF ENGINEERING  
VIII Semester (2008-2009)**

*Under the Guidance of*  
**Prof. P.S.PATIL**

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## 1. ABSTRACT

This portable device provides Thalassemia patients continuous infusion of iron chelator with high accuracy. Patients can easily program the infusion with large 3-digit LCD display and few operation buttons. So they can leave the device running and have their daily life without wasting 10-12 hours at hospital.

### **Little about Thalassaemia**

Thalassaemia is an inherited disorder in which there is an abnormality in one or more of the globin genes. People with Thalassaemia cannot make enough Haemoglobin, the very important substance in blood carrying oxygen from lungs to other parts in body. Because of this, their marrow cannot produce enough blood cells. They will become anemic, pale, do not sleep well, do not want to eat. If children with Thalassaemia are not treated, they usually die between one and eight years old. The only practical treatment for Thalassaemia patients is regular blood transfusion. Somehow, this treatment leaves extra iron in blood. If it is not removed, it builds up and can damage the liver, heart and other part of body and patient will die at young. To remove extra iron (iron chelation), patient must receive injection of a drug called Desferal. Desferal will be injected under skin at very slow rate over 10 hour per syringe volume. With the device presented, patient can have iron chelation at home, save the all-day time spent at hospital and continue their usual activities.