

The invention relates to a device for monitoring the concentration of sugar crystals at boiling massecuite. The apparatus includes a body portion with optical windows, the light emission source, light signal processing unit with photodetectors. According to the invention, the body portion is sealed, with the hollow recess and optical windows arranged on opposite sides of the recesses in parallel to each other. A light radiation source is installed inside the body portion opposite to one side depression on the same optical axis with optical windows, and opposite the other side of the depression within the body part on the same optical axis with optical windows there is located a light guide mounted to transmit light signal to the light signal processing unit. This unit includes a dispersing element, and at least one photodetector, while the body portion is adapted to be immersed into the massecuite. The technical result: increase of the efficiency of the device by increasing the accuracy and speed of measurement of parameters of crystal formation during the process of boiling massecuite.