Heavy mass ion Au of 80MeV and light mass ions B of 10MeV were irradiated in tungsten foil with the same fluence. Present work concerns a comparison study of the effect of irradiation with different mass ions on microstructure of tungsten. The defects produced in both cases were studied using diffraction contrast technique with bright field condition in transmission electron microscopy. The characterization of defects was carried out in terms of nature, size and density. Dislocations and clusters were found in both ion irradiation, however, dislocation loops were also identified in the case of boron ion irradiation.