"The COMET experiment (J-PARC E21) employs aluminum stabilized superconducting cable for the Pion Capture Solenoid, which will be exposed to severe radiation from the pion production target. Neutrons from the reactor at the Kyoto University Research Reactor Institute have been exposed to the stabilizer material of aluminum alloy and pure copper in a cryogenic temperature to investigate the effects of irradiation and thermal cycling. The results of the irradiation tests and the design updates on the COMET superconducting magnets will be reported in the presentation."