The production of black rice in Korea has been increasing, as more Koreans are tending to blend black rice with medium-grain rice for serving. This increased production creates an opportunity for developing new products. In this study, the properties of sponge cakes produced from a blend of black rice flour (BRF) and wheat flour (WF) are investigated. Black rice sponge cakes (BRSC) were produced with constant process variables (e.g. baking temperature, fermentation time and BRP content [10, 20 & 30%]). Proximate compositions, farinogram, amylogram and extensogram analyses of BRSC were determined by AACC method. BRSC color was expressed to Hunter L, a and b values using a colorimeter. Sensory properties were evaluated by a trained 5-member panel. Moisture contents in BRSC decreased with increasing contents of BRF, while ash and protein contents were increased. Farinograph and amylograph data did not differ significantly between treatments, while extensograph data decreased with increasing BRF contents. With increasing BRF contents, Hunter L value decreased, while Hunter a value increased. When using 20% of BRP, sensory scores of BRSC were the highest in color, flavor and taste. In conclusion, 20% of BRF would be the optimum amount for producing sponge cake with BRP and WF.