Compact operators on some BK spaces related to the l_p spaces

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Abstract. The BK spaces $n(\phi)$ and $m(\phi)$ which are related to the l_p spaces, were introduced by Sargent [J. London Math. Soc., 35 (1960) 161-171]. In this paper, we determine the Hausdorff measure of noncompactness on the sequence space $n(\phi)$. Furthermore, by using the Hausdorff measure of noncompactness, we apply our results to characterize some classes of compact operators on these BK spaces. In this paper, we characterize the classes of compact operators $\mathcal{C}(m(\phi), c)$ and $\mathcal{C}(n(\phi), c)$ by using the Hausdorff measure of noncompactness.