Difference analogues of embeddings
of weighted Sobolev spaces

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In the work we research the following space

\[ w = \left\{ y = (y_j)_{j=0}^\infty : \|y; w\| = \left\{ \sum_{j=0}^{\infty} (\rho_j |\triangle y_{j-1}|^p + \upsilon_j |y_j|^p) \right\}^{1/p} < \infty \right\} \]

\((1 < p < \infty)\) which is a difference analogue of two-weighted Sobolev space. We consider embedding questions of \(w\) into the space \(l_{q,u}\) of sequences.