Concentration-compactness method allows a functional-analytic formulation in terms of a profile decomposition. Given a group $D$ of linear isometries on a Banach space $E$, profile decomposition of a sequence in $E$ is its representation as a sum of (1) asymptotically decoupled elementary concentrations and (2) of a $D$-weakly vanishing remainder. The notions involved are defined as follows. (1) An elementary concentration is a sequence of the form $g_k w$, $g_k \in D$. Two elementary concentrations $g_k v$ and $g_k w$ are called asymptotically decoupled if $g_k^{-1} h_k$ converges weakly to zero. (2) A sequence $(v_k) \subset E$ is called $D$-weakly vanishing if for any sequence $(g_k) \subset D$, $g_k v_k$ converges weakly to zero.

A non-compact imbedding of $E$ into a topological vector space $Y$ is called cocompact (relative to $D$) if every $D$-weakly vanishing sequence in $E$ vanishes in the topology of $Y$. Imbeddings of homogeneous Besov and Triebel-Lizorkin (including Sobolev) spaces into $L^p$ are cocompact relative to translations to dilations.

We state a general result for existence of profile decomposition in Banach spaces which extends previously known results for Hilbert spaces and spaces of Sobolev type. (Received February 02, 2015)