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_Completeness of cocompletions in enriched category theory_

(Joint work with J. Velebil.) We study the existence of limits of a certain class $L$ inside the cocompletion $C(A)$ of a $V$-category $A$ under a class of colimits $C$, where $V$ is a symmetric monoidal closed category that is locally finitely presentable as such. We investigate conditions that are equivalent to the existence of $L$-limits of representables inside the $C$-cocompletion of a category and we exploit them in order to characterize the $L$-completeness of $C(A)$ for particular classes $C$ and $L$. Some well-known conditions for additive categories and posets arise from our analysis, while we obtain a (seemingly new) characterization of the small completeness of the inductive completion of both an ordinary category as well as of a category enriched in simplicial sets.

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