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pH-Profiling of thermoactive lipases and esterases: caveats and further notes
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Abstract
A common technique for assaying lipase/esterase activity in vitro is the enzymatic cleavage of *para*-nitrophenyl esters, with spectrophotometric monitorization at 405–410 nm of the released *p*-nitrophenol (*p*NP). This method has its limitations, since the extinction coefficient of *p*NP is strongly pH-dependent. Despite this, the method is being frequently used for investigating lipolytic activity over a pH range without any pH-related corrections, which may bring along false results. We show to what extent the results may be altered by this approach and we review alternative strategies allowing the method to become usable both in the acidic range and with varying pH.

Keywords: Buffer; *p*-nitrophenol; pH; Temperature coefficient; Thermostable lipase/esterase