ERRATUM TO

Chapter 5
Colorimetric Detection of Acetyl Xylan Esterase Activities

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Tables 1 and 2 in Chapter 5 were originally published with incorrect molecular drawings. These have been corrected and the chapter references have been updated.

The online version of the updated original chapter can be found at http://dx.doi.org/10.1007/978-1-4939-6899-2_5

Table 1
Summary of reported methods for reaction termination and product detection in assays containing *p*NP-acetate, α-naphthyl acetate, and 4MUA

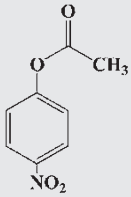
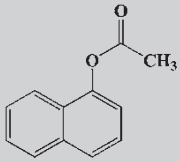
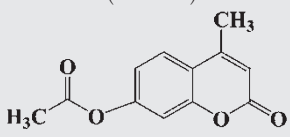
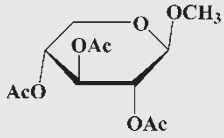
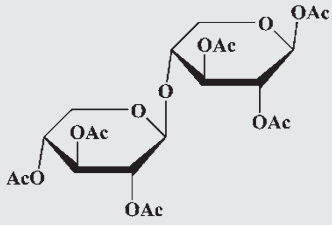
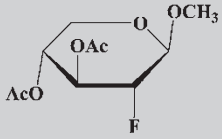
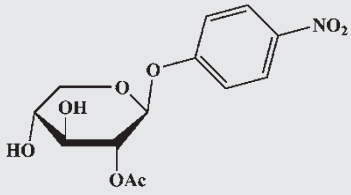
Substrate	Developing reagent	Product detection	Reference (s)
p-Nitrophenyl acetate (*p*NP-acetate) 	None	*p*-nitrophenol at 410 nm	[5, 9–12]
	None	*p*-nitrophenol at 420 nm	[6, 13–16]
	None	*p*-nitrophenol at 405 nm	[17–22]
	Sodium carbonate (Na_2CO_3)	*p*-nitrophenol at 405 nm	[23]
	none	Acetic acid detection kit from Boehringer Mannheim	[8]
α-naphthyl acetate 	Fast Garnet GBC in sodium dodecyl sulfate; incubate at room temperature for 15 min	α-naphthol in complex with developing reagent at 560 nm	[16–18, 24]
	Fast Corinth V salt in sodium acetate buffer (pH 4.3) containing Tween 20; incubate at room temperature for 10 min	α-naphthol in complex with developing reagent at 535 nm	[25–27]
	none	α-naphthol directly at 321 nm	[28]
4-methylumbelliferyl acetate (4MUA) 	Citric acid to decrease pH to 2–3	4-methylumbelliferone (4-MU) at 354 nm	[7]

Table 2
Summary of noncommercial, synthesized carbohydrate analogs used to detect AcXE activity

Substrate	Reported approach to product detection	Reference(s)
Acetylated methyl β-D-xylopyranosides (e.g., 2,3,4-tri-O-acetylated methyl-β-xylopyranoside)  Acetylated xylobiose 	• Gas-liquid chromatography (GLC-MS) • Acetic acid detection with K-ACETRM acetic acid kit from Megazyme • TLC detection of released sugars • ^{1}H NMR determination of regioselectivity	[2, 9, 29–31]
Deoxy and fluoro derivatives of methyl β-D-xylopyranoside diacetates (e.g., 2-deoxy-2-fluoro-3,4-diacetylated methyl β-D-xylopyranoside) 	• TLC detection of released sugars	[32, 33]
Monoacetylated *p*-nitrophenyl β-D-xylopyranosides (e.g., 2-O-acetyl nitrophenyl β-D-xylopyranoside) 	Addition of $Na_2B_4O_7$ (or N_2CO_3) followed by *p*-nitrophenol detection at 405 nm	[34–36]