

PERSONAL LABORATORY LOGBOOK

Assigned to

Andre' van de Beek

Logbooknumber

ABE-P89

Date of issue

23-Mar-09

Exhibit 2017



te/Initials		DYE-0	73	Experi	ment		
09		=======================================					
]	Experime	nt: OxE-073				/2 May09	ABE
		9	o				
		RO	он -		Co/Mn/Br		-
		<u></u>					
— T	he objective MMF.	e of this experimen	nt is to study	the stability	of the final con	npounds (FDCAR)	n the oxid
N	lain objecti	ve: Stability o	of produ	cts			
— т	able 1: Che	micals					
	ame	HMF	MMF	МеОН			
S	as nr						
	ot nr				_		
	w (g/mol)						
_	info				-1		
N	ame	Saccharine	AcOH				
	ıpplier	Aldrich					
	as nr	81-07-2					:
	ot nr	S37371-017					
M	w (g/mol)	183.19					
	info	98+%					
	able 2: Appa	aratus					180
	paratus	HPLC06					-
G	and / type ard Column	Agilent					
	olumn	none Sunfire C18	4.6*10 cm, 3.5 u				-
		186002553	4.0°10 cm, 3.3 u	m, part no.			-
Fle	ow (ml/min)	1.0					14
	ren temp (°C)	40.0					-04
Me	obile phase		% TFA with MeO	H : ACN			MAN
Me	ethod name	(50:50)	rendiant 25min			2	374
	alyzing	000313-OXE-8	gradient-35min.m	et		U	Sylva OA
Ap	paratus	HTHP QCS			T .	141	1
	rring speed (rp	m) 750				K	š
	CS Heating T (° ber T °C)	247 (results in 175	220 °C inside the	e reactor)			
					•	:(
	ble 3: Catal					:	
Cat		Cas nr.	Avantium nr.	MW	Purity	6	
	(OAc) ₂ 4H ₂ O	6147-53-1	N7019	249.08	98-102	-	
Na		6156-78-1 7647-15-6	105A	245.09	99+		
. 148		/04/-13-6	143	102.89	99+		
Eve	erimental DEX	AADV.					
Det Ext	erimental REN	MARK; issolving and adding C	at and autor		7 ms. 20		
Dat	te starting rea	ction of experiment	at and substrate	: 1	2 may 29 list		
Day	e weighing, di	ssolving and adding S	accharine stock	solution :	4 9 /	2 0	
Dai							
Dat	e of analyzing	with the HPLC according HPLC-6 log		: 1	3 mayor by	and	

Load blocks according table 1 till 16. Weighing tolerance ± 0.3 mg.

	ials (24E - 0,	73	Exp	erim	ent ·				
unog		/								
m=	Add stirring magnet. Close with teflon/rub	nher can				-				
Ì	Close with teflon/rub Bring under pressure Placed in preheated I Placed immediately a Open and thereby de	with <u>Air</u> till 6	0 Bar at RT							
——	Placed in preheated I	HTHP QCS of 1	80 °C, according s	settings in ta	ble 2, durii	ng 1 hours 127	nayog	0		
	Open and thereby de	compress reactor	rs.	ii duriiig 55	minutes.	(64)	ABF			
	TOUR TO THE OF DIVIDA	1 1 1/2	C W TOUR	le		1	///			
	Add 5.0 ml of Saccha These dilutions when	e stirred for 200	minutes			1)		=		
_		Anne strange to the second	\$500x000xxco-0;	1s 450	ring a	hole might.	2//	0, -ii	_	
I	These dilutions to 7 to Dilutions to 700 time	es were made by	10 µl of dilutions	8 times + 99	0 μl of W	ater in HPLC	rials.	6		
	Table 4: Substrate	MMF solution	s, in table 11 to	12 called A	A. and B		J C 100			
	Sol A		Amount					Amount		
	(111.12 mg/	mI)		(22	2.24 m	the state of the s			9	
la la	MMF [g]			MMF		w//				
	V AcOH [ml]			VAcC	H [ml]					
	Total V [ml] Concentration (mg/m	an a		Total V	/ [mi] ntration (m	o/exl)				
	Date			Date	addition (in	yan)				
5	Samples prepared wit	th this		Sample	es prepared	with this	/			
s	solution.			solutio						
	n Sacchavine [g] V McOH [mi] Const V [mi] Concentration (mg/m Date samples propaged within solution.	ly .	amount	Sam OyE.	e a -068					
	V MeOH [mt] Total V [mt] Concentration (ing/m Date Samples propaged within solution).	d)	5 rollot			×E.69.14	. 65			
	V MeOH [mt] Total V [mt] Concentration (ing/m Date Samples propaged within solution).	Mn /kr -1	5 rollot	fra 2	ee -0;	≠E . 6g , & V. Time 1 hours	65			
	V MeOH [m] Foral V [m] Concentration (ing/m Patte Samples propaged with a solution.	Mn /kr -1	5 rollot	fra 2	ee -0;		Solvent	HPLC name		
	Table 11: Block 1 / R R Substrate Nr. MeOH [ml] Concentration (ing/m) Concentration (in	Mn/kn-1 Temp = 220 °C Substrate	5 rollot. / P= 60 bar (Air) Cat Code	/ T ₀ = /4/2	V _{Cat}	Cat concentration [mol %]	Solvent	name		
	Table 11: Block 1 / R R Substrate name 1 FDCA	Mn /kn -1 Temp = 220 °C Substrate	5 rollot. / P= 60 bar (Air) Cat Code	/ T ₀ = /4/2 V AcOH [ml] 1.0	V _{Cat}	Cat concentration [mol %]	Solvent	oxE073-V1		
	Table 11: Block 1 / R R Substrate name 1 FDCA 2 FDCA	Mn /kn -1 Temp = 220 °C Substrate 50 499 50 499	5 rollot. / P= 60 bar (Air) Cat Code	/ T ₀ = /4/2 V AcOH [ml] 1.0 1.0	V _{Cat}	Cat concentration [mol %]	Solvent AcOH AcOH	OxE073-V1 OxE073-V2		
	Table 11: Block 1 / Page 1 FDCA F	Mn /kn -1 Temp = 220 °C Substrate 50 499 50 466	/ P=60 bar (Air) Cat Code	/ T ₀ = /4/2 V AcOH [ml] 1.0	V _{Cat}	Cat concentration [mol %]	Solvent	oxE073-V1	₽.	
	Table 11: Block 1 // R Substrate name 1 FDCA 2 FDCA 3 FDCA1/2Me 4 FDCA1/2Me 5 FDCA	Mn /kn -1 Temp = 220 °C Substrate 50 494 50 496 50 497 50 50 50	/ P= 60 bar (Air) Cat Code Co/Mn/Br-15	V Acoh [ml] 1.0 1.0 1.0	V _{Cat} [m] 1.0	Cat concentration [mol %]	AcOH AcOH AcOH AcOH AcOH	OxE073-V1 OxE073-V2 OxE073-V3 OxE073-V4 OxE073-V5	= '	
	Table 11: Block 1 // R Substrate name 1 FDCA 2 FDCA 3 FDCA1/2Me 4 FDCA1/2Me 5 FDCA 6 FDCA	Mn /kn -1 Temp = 220 °C Substrate 50 493 50 493 50 493 50 50 50 50 50	7 P= 60 bar (Air) Cat Code Co/Mn/Br-15 Co/Mn/Br-15	V Acoh [ml] 1.0 1.0 1.0	V _{Cat} [ml] 1.0 1.0	Cat concentration [mol %]	AcOH AcOH AcOH AcOH AcOH AcOH	0xE073-V1 0xE073-V2 0xE073-V3 0xE073-V4 0xE073-V5 0xE073-V6	-	
	Table 11: Block 1 // R Substrate name 1 FDCA 2 FDCA 3 FDCA1/2Me 4 FDCA1/2Me 5 FDCA 7 FDCA1/2Me	Mn /kn -1 Temp = 220 °C Substrate 50 494 50 494 50 494 50 494 50 494 50 494	7 P= 60 bar (Air) Cat Code Co/Mn/Br-15 Co/Mn/Br-15 Co/Mn/Br-15	V Acoh [ml] 1.0 1.0 1.0	V _{Cat} [ml] 1.0 1.0	Cat concentration [mol %]	AcOH AcOH AcOH AcOH AcOH AcOH AcOH AcOH	0xE073-V1 0xE073-V2 0xE073-V3 0xE073-V4 0xE073-V5 0xE073-V6 0xE073-V7		
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	Table 11: Block 1 // R Substrate name 1 FDCA 2 FDCA 3 FDCA1/2Me 4 FDCA1/2Me 5 FDCA 7 FDCA1/2Me	Mn /kn -1 Temp = 220 °C Substrate 50 494 50 494 50 494 50 494 50 494 50 494	7 P= 60 bar (Air) Cat Code Co/Mn/Br-15 Co/Mn/Br-15 Co/Mn/Br-15	V Acoh [ml] 1.0 1.0 1.0	V _{Cat} [ml] 1.0 1.0	Cat concentration [mol %]	AcOH AcOH AcOH AcOH AcOH AcOH AcOH AcOH	0xE073-V1 0xE073-V2 0xE073-V3 0xE073-V4 0xE073-V5 0xE073-V6 0xE073-V7		