## REACTANTS TABLE:

svg	amount	condition	equality	formula	id	moles	mw	name
	186.008	solid	1.0	C <sub>6</sub> H <sub>4</sub> BrNO	6	1.0	186.01	2-[4-[3- (2- chlor o-5- methyl- pyri midi n-4- yl)phe ny l]butoxy] pyri din- 4-amine2-[ 4-[3- (2- chloro- 5- methyl- pyrim idi n-4- yl)phen y l]butoxy] pyrid in- 4-amine
$Br \xrightarrow{N} O \longrightarrow Br \xrightarrow{N} F$	150.177	solid	1.0	C <sub>9</sub> H <sub>10</sub> O <sub>2</sub>	4	1.0	150.18	benzyl acetate
in → in	208.006	pure	1.0	C <sub>6</sub> H <sub>4</sub> BrF <sub>2</sub> N	6	1.0	208.01	3-bromo-5-(diflu oromethyl)pyridi ne

## REAGENTS TABLE:

svg	amount	condition	equality	formula	id	moles	mw	name
$Br \xrightarrow{N} O \longrightarrow Br \xrightarrow{N} F$	150.177	solid	1.0	C <sub>9</sub> H <sub>10</sub> O <sub>2</sub>	4	1.0	150.18	benzyl acetate
	186.008	solid	1.0	C <sub>6</sub> H <sub>4</sub> BrNO	6	1.0	186.01	2-[4-[3- (2- chlor o-5- methyl- pyri midi n-4- yl)phe ny l]butoxy] pyri din- 4-amine2-[ 4-[3- (2- chloro- 5- methyl- pyrim idi n-4- yl)phen y l]butoxy] pyrid in- 4-amine
$Br \xrightarrow{N} O \longrightarrow Br \xrightarrow{N} F$	150.177	solid	1.0	C <sub>9</sub> H <sub>10</sub> O <sub>2</sub>	4	1.0	150.18	benzyl acetate
. D. → . D. <sub>Y</sub>	208.006	pure	1.0	C <sub>6</sub> H <sub>4</sub> BrF <sub>2</sub> N	6	1.0	208.01	3-bromo-5-(diflu oromethyl)pyridi ne
. D. → D.	208.006	pure	1.0	C <sub>6</sub> H <sub>4</sub> BrF <sub>2</sub> N	6	1.0	208.01	3-bromo-5-(diflu oromethyl)pyridi ne

## PRODUCTS TABLE:

svg	amount	condition	equality	formula	id	moles	mw	name
.0. → .0.	208.006	pure	1.0	C <sub>6</sub> H <sub>4</sub> BrF <sub>2</sub> N	6	1.0	208.01	3-bromo-5-(diflu oromethyl)pyridi ne
	186.008	solid	1.0	C <sub>6</sub> H <sub>4</sub> BrNO	6	1.0	186.01	2-[4-[3- (2- chlor o-5- methyl- pyri midi n-4- yl)phe ny l]butoxy] pyri din- 4-amine2-[ 4-[3- (2- chloro- 5- methyl- pyrim idi n-4- yl)phen y l]butoxy] pyrid in- 4-amine
Br	150.177	solid	1.0	C <sub>9</sub> H <sub>10</sub> O <sub>2</sub>	4	1.0	150.18	benzyl acetate

svg	amount	condition	equality	formula	id	moles	mw	name
.0. → .0.	208.006	pure	1.0	C <sub>6</sub> H <sub>4</sub> BrF <sub>2</sub> N	6	1.0	208.01	3-bromo-5-(diflu oromethyl)pyridi ne
Br	150.177	solid	1.0	C <sub>9</sub> H <sub>10</sub> O <sub>2</sub>	4	1.0	150.18	benzyl acetate
	186.008	solid	1.0	C <sub>6</sub> H <sub>4</sub> BrNO	6	1.0	186.01	2-[4-[3- (2- chlor o-5- methyl- pyri midi n-4- yl)phe ny l]butoxy] pyri din- 4-amine2-[ 4-[3- (2- chloro- 5- methyl- pyrim idi n-4- yl)phen y l]butoxy] pyrid in- 4-amine
$B_{r}$ $\longrightarrow$ $B_{r}$ $F_{r}$	150.177	solid	1.0	C <sub>9</sub> H <sub>10</sub> O <sub>2</sub>	4	1.0	150.18	benzyl acetate
ilio → iliy	208.006	pure	1.0	C <sub>6</sub> H <sub>4</sub> BrF <sub>2</sub> N	6	1.0	208.01	3-bromo-5-(diflu oromethyl)pyridi ne
Do → Dy	208.006	pure	1.0	C <sub>6</sub> H <sub>4</sub> BrF <sub>2</sub> N	6	1.0	208.01	3-bromo-5-(diflu oromethyl)pyridi ne

## PROCEDURE:

(5-bromonicotinaldehyde; mw=186.01g/mol; amount=186.008g) (benzyl acetate; mw=150.18g/mol; amount=150.177g) (3-bromo-5-(difluoromethyl)pyridine; mw=208.01g/mol; amount=208.006g; crude) 5.19.2.4.3.(iii) N-Substituted amidrazones by N-alkylation of simpler amidrazones The alkylation of amidrazones has been studied by Smith and co-workers <1971JOC1155, 1973JOC1344, 1977JOC1862>. Depending upon the substitution pattern, alkylation can occur on any of the three nitrogen atoms, but in most cases alkylation occurs at N2 or N3 so that an "amidinium like" delocalized cation is formed. Scheme 31 gives an example of N2 alkylation via a delocalized cation, whereas in Scheme 32 amidrazones 108 and 109 are also alkylated to give a delocalized cation but via alkylation at the N3 atom. Further examples are given in chapter 5.19.2.4.3 of <1995COFGT(5)741>, and there have been no significant advances since the publication of that chapter.