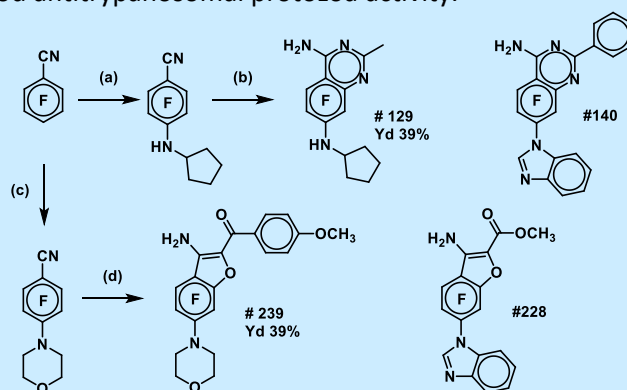


Pentafluorobenzonitrile(略号 ; PFBN) C_6F_5-CN

Purity	97%
CAS Number	773-82-0
Molecular Formula	C ₇ F ₅ N
Molecular Weight	193.08

Various fluorine-containing heterocyclic compounds such as quinazoline and benzofuran using pentafluorobenzonitrile as a raw material in a library are synthesized, and investigated their effects on protozoa that cause trypanosomiasis, which is known for sleep disorders. Cycloalkylamine modification of the fluorine-containing quinazoline skeleton and morpholine modification of the fluorine-containing benzofuran skeleton showed good antitrypanosomal protozoa activity.



Application

(a) cyclo-C₅H₉/DMF/TEA, rt*24hr, (b) CH₃(=NH)NH₂·HCl/DMF/NaHCO₃, 80°C*15hr, (c) Morpholine/DMF/TEA, RT*15hr, (d) HOCH₂CO-C₆H₄-OCH₃/DMF/DBU, 80°C*15hr,

Table; Anti-trypanosomal and cytotoxin data

No.	T. b. rhod (μM) IC50	T. cruzi (μM) IC50	L. don.Ax am (μM) IC50	Cytotox L6 (μM) IC50
#129	0.84	0.22	3.58	34.1
#140	5.1	33.2	7.6	12.9
#228	4.75	78.9	12.9	86.6
#229	2.51	4.72	12.6	4.03

Abb.; T.b.rhod; Trypanosoma brucei rhodesense STBI 900 (bloodstream trypanomastigotes, Africa Trypanosoma protozoa), T.cruzi; Trypanosoma cruzi Tulahuen strain C2C4 (Chagas pathogen, Central and South America)、L.don Ax am; Amastigote of L. donovani strain MHOE/ET/67/L87 (Leishmaniasis protozoa, Central and South America)、Cytotox L6; rat skeletal myoblast primary cell line

Loughborough Univ. Ph.D. thesis, 2021, posted by T. Huge

Properties:

Appearance	Liquid
Boiling point, °C	161-162
Melting point, °C	2.4

Capacity:	-
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