ICS 130.060.30
Z 60

DB33

DB 33/ 2015 2016

Emission standard of air pollutants for pharmaceutical industry Chemical synthesis products category

2016-7-14 参 2016-10-1

参

2018 10 1

GB 16297-1996

GB 14554

GB 13271

1

2

GB/T 14669
GB/T 14675
GB/T 15432
GB/T 15516
GB/T 16157
GBZ/T 160
GBZ 2.1

HJ/T 373
HJ/T 397
HJ 533
HJ 534 -
HJ 548
HJ 549
HJ 583 / -
HJ 584 / -
HJ 638
HJ 645 - /
HJ 683
HJ 732
HJ 734 - / -
HJ 738
HJ 739 -
HJ 2000
HJ 2026
HJ 2027

28

3 为

3.1

chemical synthesis products category of pharmaceutical industry

3.2

standard condition

273 K 101.3 kPa

3.3

stack height

m

3.4

fugitive emission

3.5

参 volatile organic compounds

VOCs

VOCs 20 10 Pa 101.325 kPa
260

3.6

non-methane hydrocarbon

3.7

benzene homologues

1,2,3-
1,2,4- 1,3,5-

3.8

dioxins

- - PCDDs PCDFs

3.9

existing facility

3.10

new facility

3.11

enterprise boundary

4

4.1

4.1.1 2018 10 1 2018 10 1 1

4.1.2

4.1.3 A B

1

mg/m^3

1			15	
2			10	
3			10	
4			1.0	
5			1.0	
6			40	
7			20	
8			20	
9			40	
10			40	
11			20	
12			30	
13	[1]		150	
14			80	
15	[2]		800	
16		A [3]	2.0	
		B [4]	20	
17	[5]		0.1	

1 VOCs VOC

2

3 A IARC
1 2A A
B C

4 B A
IARC 2B A
B C

5 ng TEQ/m^3 D

4.1.4

2

2

mg/m^3

1			10	
2			5	
3			5	
4			1.0	
5			1.0	
6			20	
7			20	
8			10	
9			20	
10			20	
11			10	
12			20	
13	[1]		100	
14			60	
15	[2]		500	
16		A [3]	2.0	
		B [4]	20	
17	[5]		0.1	

1 VOCs VOC

2

3 A IARC

1 2A A

B C

4 B A

IARC 2B A

B C

5 ng TEQ/m^3 D

$$\eta=\frac{\sum C \times Q - \sum C \times Q}{\sum C \times Q}\times 100\%$$

%

C mg/m^3

Q m^3/h

C mg/m^3

Q m^3/h

4.1.7

1 2

2

4

4

	O_2 /%
RTO	18.0

$$\rho = \frac{21-O}{21-O}\times\rho$$

mg/m^3

mg/m^3

O %

O % 20 O 20

4.1.8

4.1.9

4.2

4.2.1

4.2.2

4.2.3 2018 10 1 5

4.2.4 5

5

mg/m^3

1			0.15
2			1.0
3			0.10
4			0.10
5			1.0
6			1.0
7			2.0
8			1.0
9			2.0
10			2.0
11			2.0
12	[1]		20
13			4.0
14		A	TWA [2]/50
		B	
1 2 TWA GBZ 2.1 8h 40h			

4.3

4.3.1

15m

4.3.2

4.3.3 HJ 2000 HJ 2026 HJ 2027

4.3.4

5

5.1 ‿

5.1.1

5.1.2

5.1.3

5.1.4

5.1.5

5.1.6

5.2

5.2.1 GB/T 16157 HJ/T 397 HJ/T 373 HJ/T 732 HJ/T 75 HJ/T 76

5.2.2 HJ/T 55

5.2.3 6

6

1			GB/T 16157
			GB/T 15432
2			HJ/T 27
			HJ 548
			HJ 549
3			HJ 533
		-	HJ 534
			GB/T 14669
4		/ -	HJ 583
		/ -	HJ 584
		- / -	HJ 644
5			GB/T 15516
6		- / -	HJ 644
7		- /	HJ 645
		- / -	HJ 644
8			HJ/T 33
9			GB/T 14675
10			

11			HJ/T 38
12	1	- /	HJ 645
			HJ 683
			HJ 638
			HJ/T 66
			HJ/T 68
			HJ/T 39
			HJ/T 34
			HJ/T 35
			HJ/T 36
			HJ/T 37
			HJ 732
			HJ 733
		- / -	HJ 734
			HJ 738
		-	HJ 739
			GB/T 14676
			GBZ/T 160
1			

6

6.1

6.2

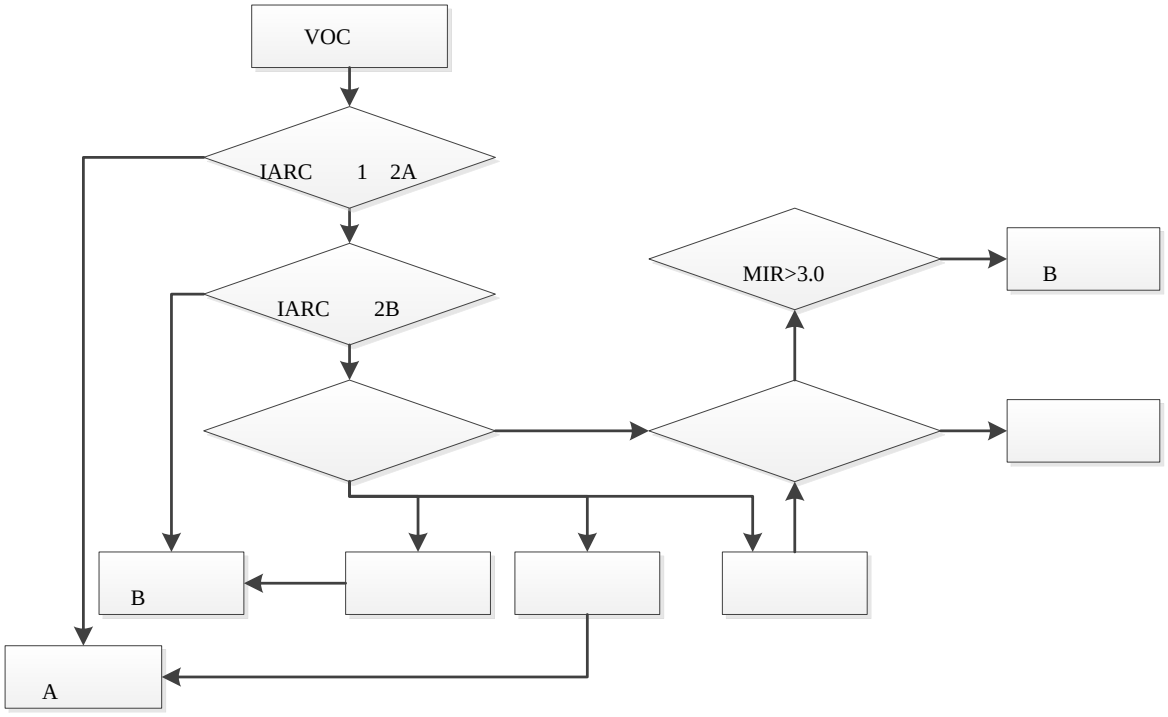
A

A B

A.1 A

		CAS			CAS			CAS
1		100-44-7	7		75-21-8	13		127-18-4
2		79-06-1	8		107-30-2	14		108-95-2
3	1,3-	106-99-0	9		107-02-8	15	2-	88-72-2
4		75-01-4	10	1,2,3-	96-18-4	16	2-	95-53-4
5		75-87-6	11		79-01-6			
6		106-89-8	12		542-88-1			

B



B. 1

B. 1

		LD_{50} mg/kg	LD_{50} mg/kg	LC_{50} mg/m^3 4h [3,4]
[1,2]				
		<5	<50	<100
		<50	<200	<500
		<300	<1000	<2500
		<2000	<2000	<20000

1

2

3 4 h 1 h 2

4 2 h 3 h 1 h

4 LC50

450 mg/m^3 550 mg/m^3 450 mg/m^3

C

VOCs MIR

		CAS	MIR			CAS	MIR
1		71-43-2	0.72	34		67-66-3	0.022
2		100-42-5	1.73	35		79-01-6	0.64
3		71-23-8	2.5	36		127-18-4	0.031
4		67-64-1	0.36	37		109-99-9	4.31
5		107-13-1	2.24	38	1-	71-41-0	2.83
6		107-02-8	7.45	39		74-89-5	7.7
7		79-10-7	11.38	40		75-04-7	5.78
8		96-33-3	11.48	41		100-41-4	3.04
9		141-32-2	5.02	42		141-43-5	6.81
10		71-36-3	2.88	43		107-21-1	3.13
11	1,3-	106-99-0	12.61	44		60-29-7	3.76
12		123-72-8	5.97	45		75-07-0	6.54
13	2-	78-93-3	1.48	46		64-19-7	0.68
14		106-46-7	0.178	47		109-60-4	0.78
15		124-40-3	3.17	48		123-86-4	0.83
16		75-09-2	0.041	49		79-20-9	0.072
17	1,2-	107-06-2	0.21	50		108-05-4	3.2
18		108-95-2	2.76	51		141-78-6	0.63
19		110-00-9	9.15	52		75-31-0	7.23
20		108-93-0	1.95	53		67-63-0	0.61
21		108-94-1	1.35	54		142-82-5	1.07
22		110-82-7	1.25	55		110-54-3	1.24
23		75-56-9	0.29	56		140-88-5	7.77
24		107-41-5	1.45	57		108-10-1	3.88
25	2-	591-78-6	3.14	58		67-68-5	6.68
26		108-88-3	4	59		85-44-9	2.58
27		67-56-1	0.67	60		95-50-1	0.178
28		79-41-4	18.50	61		108-90-7	0.32
29		80-62-6	15.61	62		78-95-5	9.41
30		50-00-0	9.46	63		74-87-3	0.038
31		64-18-6	0.066	64		107-20-0	12.30
32		109-86-4	2.93	65		91-20-3	3.34
33		84-74-2	1.25				

	T4CD
	P5CD
	H6CD
	H7CD
	OCD

6 171□

$PCDD_S$	2,3,7,8-T_4CDD
	1,2,3,7,8-P_5CDD
	1,2,3,4,7,8-H_6CDD
	1,2,3,6,7,8-H_6CDD
	1,2,3,7,8,9-H_6CDD
	1,2,3,4,6,7,8-H_7CDD
	OCDD