indoor air quality standard

(GB/T18883 2002)

A B C D

:

2002 ! 11 " 19 # $ % & ' & ( )

$ % & ' & (* +

, - . /

1 0

1 2 3 4 & ' 5 6

7 8 9 : ; < = > ? @ 2 A B C

2 D 8 E F

G H E F I J K L D 8 M N I J O P Q # R D 8 E F > S T U

VW(XYZ[\ ])^V_`aX78 bM cdef gNhi j5 P k@l8mnEF op` OPXQ#R D8EF >op` 78

GB/T 9801	qrst u vwxyz6
GB/T 11737	{9| } ~} •~} &' 56 !6
GB/T 12372	{9| •rs"&' 56 W# **Saltzman** 6
GB/T 14582	$ u 56
GB/T 14668	$ u %&'() 6
GB/T 14669	$ u *+,-./6
GB 14677	~} •~} }01 u !6
GB/T 14679	$ u 234-563w7786
GB/T 15262	•rs9 u ~:;<-=>?}@w7786
GB/T 15435	•rs" u **Saltzman** 6
GB/T 15437	Ar u BC•D34w7786
GB/T 15438	Ar u Ez786
GB/T 15439	}F**[a]**Gu HIJ !6
GB/T 15516	~: u 0KLMw7786
GB/T 16128	{9| •rs9 &' 56~:NJ;<-O3=>?}@w7786
GB/T 16129	{9| ~: P&' 56 w7786
GB/T 16147	$Q8 RSTu 56
GB/T 17095	U@; VW=
GB/T 18204.13	<XY Z8u 56
GB/T 18204.14	<XY [\8u 56
GB/T 18204.15	<XY]^u 56
GB/T 18204.18	<XY p_ u 56 `a 6
GB/T 18204.23	<XY qrst&'56
GB/T 18204.24	<XY •rst&'56
GB/T 18204.25	<XY $&'56
GB/T 18204.26	<XY ~:u 56

7	q r s t CO	mg/m^3	10	1	z a 3	

A.1 0

T U 1 $ u z , V G u v z { W X u v 5 6 C D j R 2 3 & ' 5 6 Y Z [u ' \ ] ^ _

A.2 , V G

A.2.1 u v V 3 ` u v V 3 e f $ u a b c Y d e M f O R g | f h i = 5 = j U k **50** l m { % n **1—3** o V p **50—100** l n **3** 5 **5** o V p **100** l O k q r n **5** o V l [s t k ^ u G v a w w

A.2.2 u v V % x K _ y * z { | * % **0.5rn**

A.2.3 u v V H 8 ` j U k } ; ~ H 8 q • [H 8 **0.5m—1.5m** ! {

A.3 u v z { W X

! = a Q 8 q r u v **3** o " # = a Q 8 q r u v **18 h** **8 h** = a Q 8 q r u **6h** **1h** = a Q 8 q r u v **45 min** u v z { % K _ o z {

A.4 u v 5 6 u v C D

e f = l l " , 8 7 u v 5 6 C D 8 u v D % **50 dB** e **A** f u v 5 6 % j o = & ' 5 6 5 6 #

u v L & ' & ' L 0 U m) v

A.5.4 C D l 8 % C D [C D # C & '

A.5.5 l Q 8 z % 8 G v u v b N " G b `

$$V_0 = V\frac{T_0}{T}\cdot\frac{P}{P_0}$$

v **V0-------** N " G u v b **L** p

V ------- u v b **L** p

TO------- " [Z 8 **273K** p

T—— u v z u v V c Y Z 8 e **t** f " [Z 8 ! **(t+273)K** p

P0—— " G $ m **101.3Pa** p

P—— u v z u v V $ m **kPa**

A.5.6 = C u v u ! = a 3) [X L **20**

A.6 & ' 5 6

j R 2 3 & ' 5 6 - . **A.1**

表 A.1 室内空气中各种参数的检验方法

/ 0	=	& ' 5 6	
1	• r s 9 **SO_2**	~ : N J ; < —— O 3 = > ? } @ w 7 7 8 6	**GB/T 16128** **GB/T 15262**
2	• r s " **NO_2**	W # **Saltzaman** 6	**GB 12372** **GB/T 15435**
3	q r s t **CO**	v w x y z 6 X w 7 y z t w x 6 ! 6 6	**GB 9801** **GB/T 18204.23**
4	• r s t **CO_2**	X w 7 y z t w x 6	**GB/T 18204.24**

		! 6] 6	
5	$ **NH_3**	B C w 7 7 8 6 % & ' (w 7 7 8 6 * + , - . / 6 2 3 4 — 5 6 3 w 7 7 8 6	**GB/T 18204.25** **GB/T 14668** **GB/T 14669** **GB/T 14679**
6	A r **O_3**	E z 7 8 6 B C • D 3 4 w 7 7 8 6	**GB/T 15438** **GB/T 18204.27** **GB/T15437**
7	~ : **HCHO**	**AHMT** w 7 7 8 6 ' (w 7 7 8 6 ! 6 0 L M w 7 7 8 6	**GB/T 16129** **GB/T 18204.26** **GB/T 15516**
8	} **C_6H_6**	! 6	**B** **GB 11737**
9	~ } **C_7H_8** • ~ } **C_8H_{10}**	! 6	**GB 11737** **GB 14677**
10	} F **[a]** > **B(a)P**	H I $ J ! 6	**GB/T 15439**
11	@ ; V W = **PM_{10}**	v — — 6	**GB/T 17095**
12	r U s = **TVOC**	! 6	**C**
13	E 3	6	**D**
14	Z 8	J Z 8 6 3 v Z 8 6	**GB/T 18204.13**
15	[\ 8	K _ N \ . 6 2 s \ 8 6 .] v 3 \ 8 6	**GB/T 18204.14**

16	] ^	v . _ ^ 6 3 v _ ^ . 6	**GB/T 18204.15**
17	p _	` a 6	**GB/T18204.18**

? Q 8 R S T u 5 6 **222** u ? Q . 4

18 ? **^{222}Rn**

p 6

6

t 6

5 6 B f **GB 11737-89** { 9 | } ~ } • ~ } & ' 5 6 — !
6

B.1.2 j h ` } 8) u * b T 8 • 9 s t * M + 8 + , - * + s & u D
! C w x O y z { . H

B.1.3 N / 0 I ` 5

B.4.6 ! C ` + , - * + s & u D

B.4.7 ! w ` **0.53mm×30mm** Y p v / Z [(w

B.5 u v v

l u v V \ ) G] p q r **2mm** u v D y ^ o _ ` O **0.5L/min** ^ 8 a M **20L** u v T G M k N O F u v z Z 8 $ m v @ **5** S

B.6 w x

B.6.1 ! w x I F ` ! w x I F * b ' I F X M U) O % e f 8 ! C c 0 g g w x } o d ! w x I F

B.6.2 t u b + ` l v w x I F G (-67) F4+1 12 T 12 0 TD (9)

C 8 + x + g

C.1 5 6 *

C.1.1 B f

ISO 16017-1 "Indoor ambiant and workplace air?/FONT>Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography?/FONT>part 1 ` pumped sampling"

C.1.2 j h

, - 7 ; (e **Tenax GC** ^ **Tenax TA** f 8 ; u * q b v] r U s s = y l ; u v T ; e . ; r U s s = u v S z { # (! C 8 y z { . H ^ . a b

C.1.3 N / 0 I

u v @ h s u v ; (l N / | K o p , - 7 ! w w x I F 6 g } R r U s = w * l X = N / ~ • O .

C.2 7 8 0

C.2.1 u 0 ` 6 7 8 Q 8 0 **0.5m g/m³** 5 **100mg/m³** ! { **VOCs** u

C.2.2 7 8 Y ` 6 7 8 Y ! 7 8 ^ _ c ^ c u ' " / i

C.3 ' (

w x L l 8 ' (% ! = p $] w x = > ? = s @ h Y ! w x & A .

C.3.1 VOCs ` 1 | Q 8 > 8 **VOCs** # ' (f N > Q 8 N J ^ b T u 8 J z 6 ^ z 6 > Q ;

C.3.2 j / N (` J z 6 8 j / N (% ! = l !] + t % u s = w *

C.3.3 ; (` l 8 ; (W p **0.18** 5 **0.25mm** e **60** 5 **80** D f ; (l E $ % l > o H l 8 Z 8 G 8 z] e s @ h L % 1 & • ; (% l ' ( ) q Z g E . ; Z 8 % Q s Z 8 * + E J ; l 8 ! > s @ h

C.3.4 H = " ` **99.999%**

C.4 C D n 4

C.4.1 ; `P z p **6.3mm** p **5mm** F **90mm** { , 7 X - . ; u v y q G U ; @ O E / q R ^ } R ; (% l ; 0 @ . ; C e | e f ; (8 ; @ E / **200** 5 **1000mg** ; (G 8 X - . 1 ^ 2 3 (4 9 $] l q 5 ; l 8 } R ; (; (% ; g m 6 e 7 / 0 H F 8 2 3 (8 ; g m o 9 E / l ; u v y G

C.4.2 Q D ` **10m L** J Q D p **10m L** Q D p **1mL** Q D

C.4.3 u v : `] o u v :] 0 **0.02** 5 **0.5L/min**] U l 8 z 8] u v l u v u v T]] \ % **5%**

C.4.4 ! C ` f 4 + , - * + s & u D ! & u D ^ > 7 & u D ! w ` v / e / g 3 **10** f Z [(w

C.4.5 . ; C ` g [; # C • . ; F . ; 8 z { ~ # ! C . ; Z 8 z { {] ^ P @ 8 (; @ . ; v # C Q <

C.4.6 J z 6 4 H Q E ` * ! # v y @ O l t l 8 ! @ O = @ E f y # v y { _ t # v y G G @ ; _

C.5 u v v

; u v : 8 N ^ > ? @ _ ` o u v z u v ^ o E l } ; ~ p I u v z , - 7 u v \ u v : 8 A] O Y l 7 n z { B > u v be **15** **10L** f $] v L **1mg** u v b % % | r u v ! \ C z z { u v] Z 8 $ m

u v T M G P G ^ > i @ P D E ^ v @ **14** S

C.6 w x

C.6.1 v . ; Q <

; E l . ; C k e l U s 1 F ; (k . ; G F G {] ~ (; # C Q < {] 5 H u v z 5 H h b T K O Q] ^ I ^ . ; ?

. **C.1** . ; I F

. ; Z 8	**250** 9 5 **325** 9
. ; z {	**5** 5 **15min**
. ;]	**30** 5 **50ml/min**
(; (Z 8	**+20** 9 5 **-180** 9
(; e Z 8	**250** 9 5 **350** 9
(; ; (	$] l 8 q N ; **40** 5 **100mg**
{	O ^ H = "
w])	v • (; ! { O 4 • (; w x w ! { w]) % e f Q 8 , -

C.6.2 ! w x I F

@ F n

$$V_0 = V\frac{T_0}{T}\cdot\frac{P}{P_0}$$ v v v v **(1)**

v ` **V_0**— N " G u v b **L** p

V — u v b **L** p

T_0— " [Z 8 **273K** p

T — u v z u v V c Y Z 8 e **t** f " [Z 8 ! e **t+273** f **K** p

P_0— " G $ m **101.3kPa** p

P — u v z u v V $ m **kPa**

C.7.2 TVOC

% [y z { l | } ~ | • ~ ! { U s = # C w x

TVOC Y Z ! V F | } ~ K | • ~ ! { U s =

e f q | t [W @ g } **VOC_S** q r % [• o o H . # C o T **TVOC** q H + m n s = X Q 8

Y Z r U s s = Q 8 **S_{id}**

[8 ~ } 8 % 3 & Z r U s s = Q 8 **S_{un}**

\ **S_{id}** **S_{un}** ! **TVOC** Q 8 ^ **TVOC** 3

] $] & u K s = + 1 **VOC** d 0 ^ _ m n ` a % b c e K **TVOC** 3

C.7.3 v u w Q 8 v

$$c = \frac{F - B}{V_0}\cdot 1000$$ **----------(2)**

v **: c** — v u w Q 8 **, mg /m^3;**

F — v w **, mg ;**

B — w **, mg;**

V_0— " G u v b **L**

C.8 5 6 w

C.8.1 & u G x ` u v **10L** z & u G x **0.5 m g/m^3**

C.8.2 t 0 ` **10^6**

C.8.3 y 8 ` l ; k e **10μg** d N J **Tenax TA** [0 **0.4%** q **2.8%**

C.8.4 f 8 `**20**9 [\ 8 **50%** I F G l ; k e **10mg/m^3** | } ~ **Tenax TA** **Tenax GR** e **5** u = a 3 f X f 8 **8.9%**

D

e f

E 3 & ' 5 6

D.1 7 8 0

5 6 7 8 E 3 u

D.2 d

6 **(impacting method)** P u 8 v W = u v D u v K L a m 8 l K L e f ^] M H ^],l j k l ~ E W + K g h i j = k k,? **37** 9 **48h** l h T, + @ 5 A k E E F 3 u v u 5 6

D.3 C D n 4

D.3.1 H $ 1 2 m E D

D.3.2 N m E D

D.3.3 Z l h n

D.3.4 o n

D.3.5 = p **(** o p **9cm)**

D.3.6 4 l h # 8 q N n 4 ` q V s r T **pH** ^ y **pH** ' s q

D.3.7 v W = u v D

u v D # G:

(1) [E t B X g **95**

(2) u ,v ~ 5 w, g U ,w < '

D.4 g h i j l h #

D.4.1. N w:

x y **20g**

P z { | **3g**

2 s 4 **5g**

i j **15** 5 **20g**

1 } 5 **1000ml**

D.4.2 6 k ~ j N w d ,e N . , | **pH** q **7.4** L w E **121** 9 **20min** H $ m E g h i j = k 4 2 A u v D l 8

D.5