

2024



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2.3.1	6
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4.1	9
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5	12
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9	23
9.1	2024	
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-700mm “ ”
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1# 2#
CH660C
1 YKR3060

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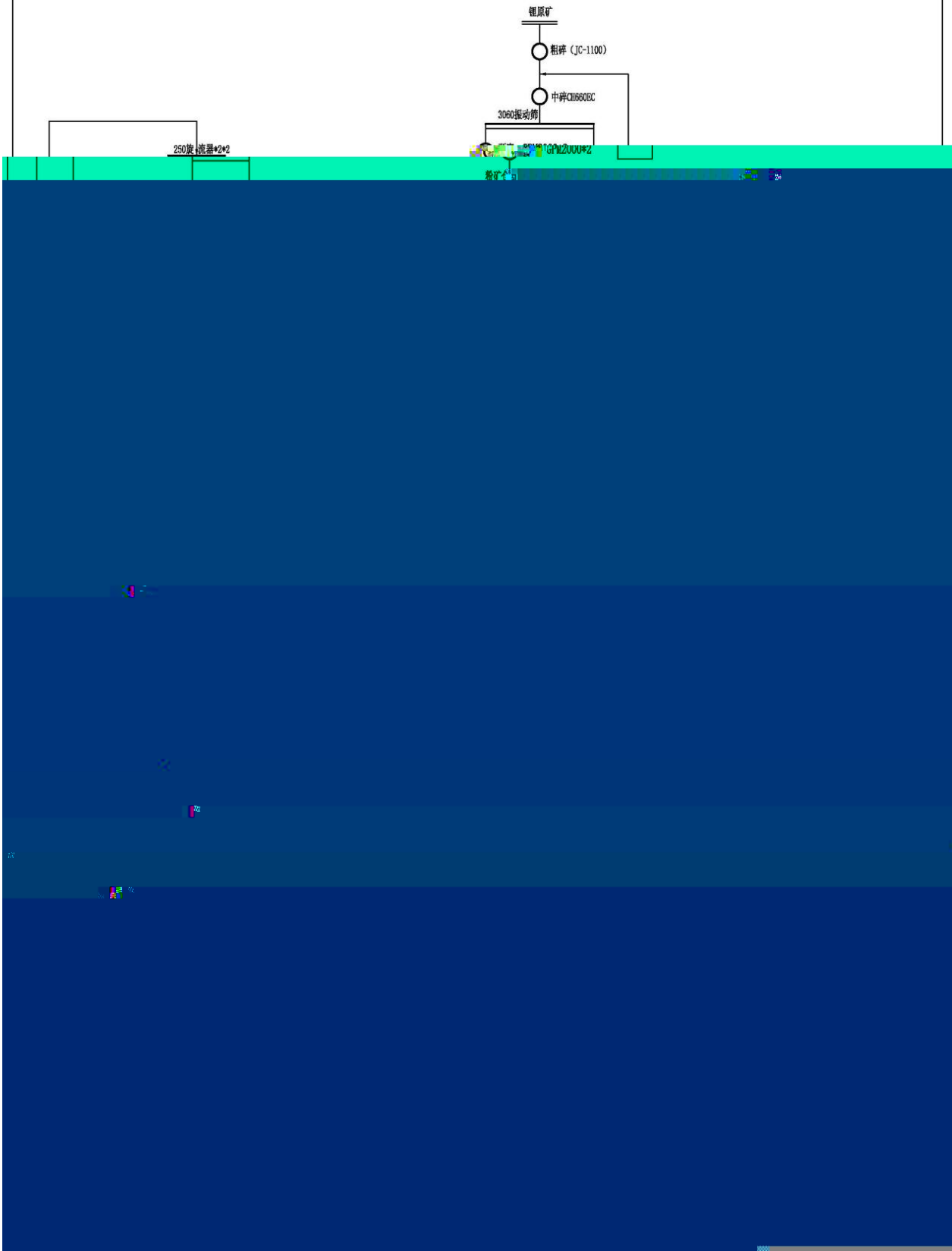
2.1.3

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选矿工艺流程图



2.2

2.2.1

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		-238 Bq/kg	-226 Bq/kg	-232 Bq/kg	-40 Bq/kg
		107	133	3.86	1027
		2549	2301	74.3	102
		33.5	51.3	3.47	1833
		61.7	93.0	2.51	428
		68.6	52.1	3.49	599

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1Bq/g

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1Bq/g

1000Bq/kg

GB20664-2006

“

²³⁸U ²²⁶Ra ²³²Th

²³⁸U ²²⁶Ra

²³²Th

1Bq/g”

1 / 1Bq/g

2.2.1

2-1

²³⁸U ²³²Th ²²⁶Ra ⁴⁰K

61.7Bq/kg 2.51Bq/kg

93.0Bq/kg 428Bq/kg

GB27742-2011

B.1 “

1Bq/g”

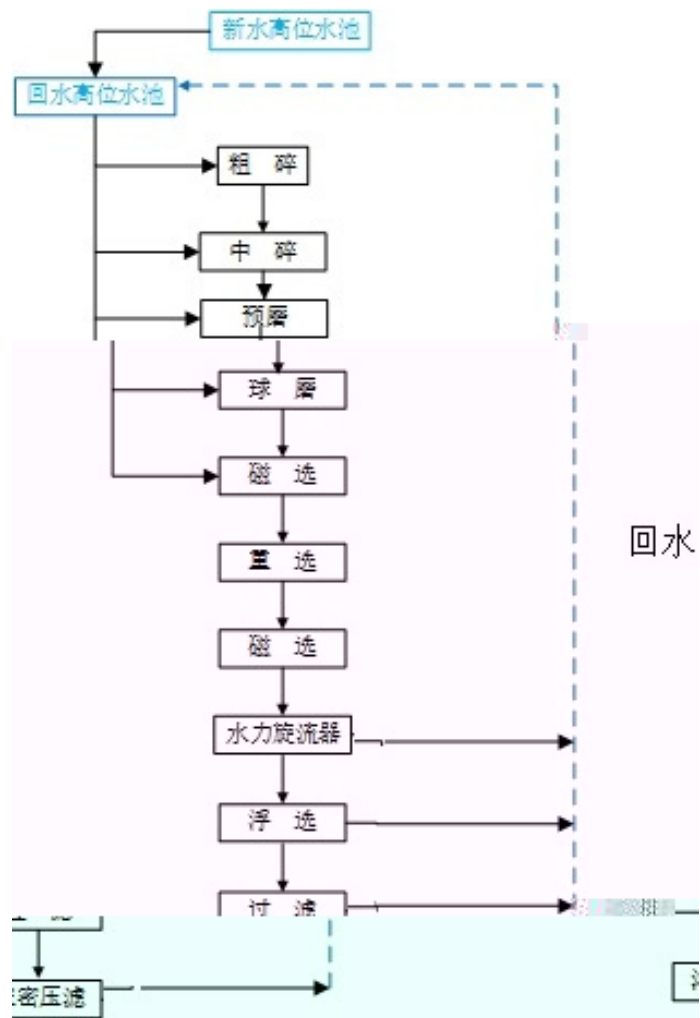
²³⁸U ²³²Th ²²⁶Ra ⁴⁰K

1Bq/g

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2.3.1

2.3.2



2.3.3

		2-1		²³⁸ U
²³² Th	²²⁶ Ra	0.0617Bq/g	0.00349Bq/g	0.0521Bq/g
1Bq/g				
	GB 27742-2011			1Bq/g

3-1

	(nGy/h)	21.8~340.8	65.9
	(nGy/h)	33.4~320.9	95.5
	(mSv/a)	—	0.74
	(Bq/m ³)	9.2~39.0	21.1
		4.5~8.2	5.8
	nJ/m ³	25~101	59
		19~33	27
	(μg/L)	0.52~1.07	0.77
	(μg/L)	0.02~1.08	0.47
	-226(mBq/L)	<1.27~6.26	2.44
	(μg/L)	0.01~0.33	0.12
	(μg/L)	0.02~0.42	0.14
	-226(mBq/L)	<1.27~22.6	5.09
	-238(Bq/kg)	19.6~168.0	58.3
	-226(Bq/kg)	22.4~178.0	62.6
	-232(Bq/kg)	18.7~160.0	53.8

1995

,1991.11(3):184

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- 1 2014 4 24 ,2015 1 1
- 2 2018 12 29
- 3 6
- 2003 10 1
- 4 2017 7 16
- 5) 2020 54
- 6 GB27742-2011
- 7) “ ” [2018]1
- 8 1995
- 9
- 10 HJ 61-2021

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- [2018]1
- 4-1

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		HJ 1157-2023	1	nGy/h	FH40G+FHZ672E-10
		HJ 1212-2023	4	Bq/m ³	RAD7
		EJ 378-1989	1.0	nJ/m ³	BWLM-PLUS-S
		GB/T 14506.30-2010	44	0.003	mg/kg
				0.8	mg/kg
	-226	GB/T 11743-2013	1.0	Bq/kg	BH1936
		HJ 700-2014	65	0.00005	mg/L
				0.00004	mg/L
	-226	GB 11214-1989	-226	0.002	Bq/L
		HJ 898-2017		0.043	Bq/L
		HJ 899-2017		0.015	Bq/L
					NexION300X
					NexION300X
					PC-2100
					LB770

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ISO/IEC 25-

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[2018]1

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	500		1 /
4			
	4 500		1 /
	8 10 10 28		
	500 1000		
	500 500 1000 4	-226	1 /
200		-226	1 /
	4		
	500 500	-226	1 /
	8		
	500 500 1000 4		1 /

	2		1 /
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7.1.1

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7-2

A1		
A2		
A3		
A4		

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7.1.2

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7-3

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1	X1		
2	X2		
3	X3		
4	X4		
5	X5		
6	X6		
7	X7		
8	X8		
9	X9~X18	1#~ 10#	
10	X19		
11	X20		

12	X21		
13	X22		
14	X23		
14	X24		
16	X25		
17	X26		
18	X27		
19	X28		

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3 1 /

7.1.3

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500m 1000m 4

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SW1	500	
SW2		
SW3	500	
SW4	1000	

2 -226

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7.1.4

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GW1		
GW2		
GW3		
GW4		

2 -226

3 1 /

7.1.5

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7-6

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S1		
S2		
S3		
S4		
S5		
S6		
S7		
S8		

2 -226

3 1 /

7.1.6

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DN1	500	
DN2		
DN3	500	
DN4	1000	

2 -226

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7.1.7

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FW1		
FW2		

2 -226

3 1 /

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7.2.1

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	(Bq/m ³)			(nJ/m ³)		
A1	8	10	9	18.8	21.2	20
A2	7	8	7.5	17.3	18.6	17.9
A3	13	12	12.5	21.7	22.8	22.25
A4	36	34	35.5	51.4	49.5	50.45

7.2.2

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		nGy/h	
X1		84±3	105±2
X2		97±3	107±4
X3		107±4	95±4
X4		94.±3	91±5
X5		104±3	92±3
X6		107±5	98±3
X7		100±5	95±3

X8		384±6	364±6
X9	1#	74±3	81±3
X10	2#	79±3	83±2
X11	3#	84±3	91±3
X12	4#	96±4	84.2±3
X13	5#	97±4	102.±3
X14	6#	87±4	99±4
X15	7#	84±4	91±4
X16	8#	103±3	80±3
X17	9#	96±3	83±3
X18	10#	100±4	88±3
X19		91±2	110±5
X20		84±3	90±4
X21		85±4	105±4
X22		89±4	87±3
X23		85±3	105±4
X24		89±4	112±5
X25		87±3	94±3
X26		87±5	88±5
X27		122±4	130±5
X28		91±4	97±3

7.2.3

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7-10

			(mg/L)	(mg/L)	-226(Bq/L)
SW1		500	0.00085	0.00048	0.006
			0.00053	0.00039	0.004
SW2			0.00074	0.00054	0.007
			0.00065	0.00048	0.006
SW3		500	0.00085	0.00036	0.006
			0.00053	0.00048	0.003
SW4			0.00065	0.00037	0.009

		1000	0.00059	0.00040	0.003
			0.00052~0.00107	0.00002 0.00108	0.00127 0.00626

7.2.4

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7-11

7-11

		mg/L	mg/L	-226 Bq/L
GW1		0.00036	0.00062	0.006
GW2		0.00226	0.00099	0.015
GW3		0.00009	0.00070	0.011
GW4		0.00012	0.00038	0.005
		0.00001 0.00033	0.00002 0.00042	0.00127~0.0226
		0.00001 0.0136	0.00002 0.0012	0.00127 0.0380

7.2.5

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7-12

7-12

	mg/kg	mg/kg	-226 Bq/kg
S1	4.60	21.3	37.3
S2	6.73	19.3	49.8
S3	7.54	20.0	46.9
S4	6.48	20.5	44.8
S5	14.3	24.2	106
S6	5.74	20.3	41.7
S7	9.97	20.2	57.9
S8	10.5	22.0	81.4
Bq/kg	19.6 168.0	18.7 160.0	22.4 178.0

Bq/kg	17.0 354.4	10.2 199.5	13.0 425.8
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7.2.6

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7-13

7-1

			(mg/L)	(mg/L)	-226(Bq/L)
DN1	500		12.6	20.1	122
			7.98	16.9	0.0862
DN2	500		10.4	24.3	93.4
			5.67	12.5	0.0427
DN3	500		11.3	22.5	116
			6.87	22.9	0.0729
DN4	1000		9.71	26.1	78.7
			3.70	9.5	0.0386
Bq/kg			19.6 168.0	18.7 160.0	22.4 178.0
Bq/kg			17.0 354.4	10.2 199.5	13.0 425.8

7.2.7

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7-14

7-14

	FW1	(FW2)
(mg/L)	0.00195	0.00262
(mg/L)	0.00447	0.00465
-226(Bq/L)	0.015	0.018
Bq/L	0.095	0.141

Bq/L	2.15	2.93
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7.3

7.3.1

7-8 8Bq/m³ 36Bq/m³
17.3nJ/m³ 49.5nJ/m³
4.6Bq/m³
39.0Bq/m³ 19nJ/m³ 101nJ/m³

7.3.2

7-9
74nGy/h 130nGy/h
1995 21.8 340.8 nGy/h

7.3.3

7-10 0.00085mg/L
0.00054mg/L -226 0.009Bq/L
1995 0.00052mg/L 0.00107mg/L
0.00002mg/L 0.00108mg/L -226 <0.00127Bq/L 0.00626Bq/L

7.3.4

7-11 0.00226mg/L
0.00099mg/L -226 0.015Bq/L
1995 0.01μg/L 0.33μg/L
0.02μg/L 0.42μg/L -226 <0.00127Bq/L 0.0226Bq/L
0.01μg/L 13.6μg/L <0.02μg/L 1.20μg/L
-226 <0.00127Bq/L 0.0380Bq/L

7.3.5

7-12

		4.60mg/kg	14.3mg/kg		19.3mg/kg
24.2mg/kg	-226	37.3Bq/kg	106Bq/kg		
		1995			
19.6Bq/kg	168.0Bq/kg		22.4Bq/kg	178.0Bq/kg	-226
18.7Bq/kg	160.0Bq/kg			17.0Bq/kg	354.4Bq/kg
	10.2Bq/kg	199.5Bq/kg	-226	13.0Bq/kg	425.8Bq/kg

7.3.6

7-13

				3.7mg/kg	11.3mg/kg
9.5mg/kg	26.1mg/kg	226		0.0386Bq/kg	122Bq/kg
				1995	
19.6Bq/kg	168.0Bq/kg		22.4Bq/kg	178.0Bq/kg	-226
	18.7Bq/kg	160.0Bq/kg			17.0Bq/kg
354.4Bq/kg		10.2Bq/kg	199.5Bq/kg	-226	
13.0Bq/kg	425.8Bq/kg				

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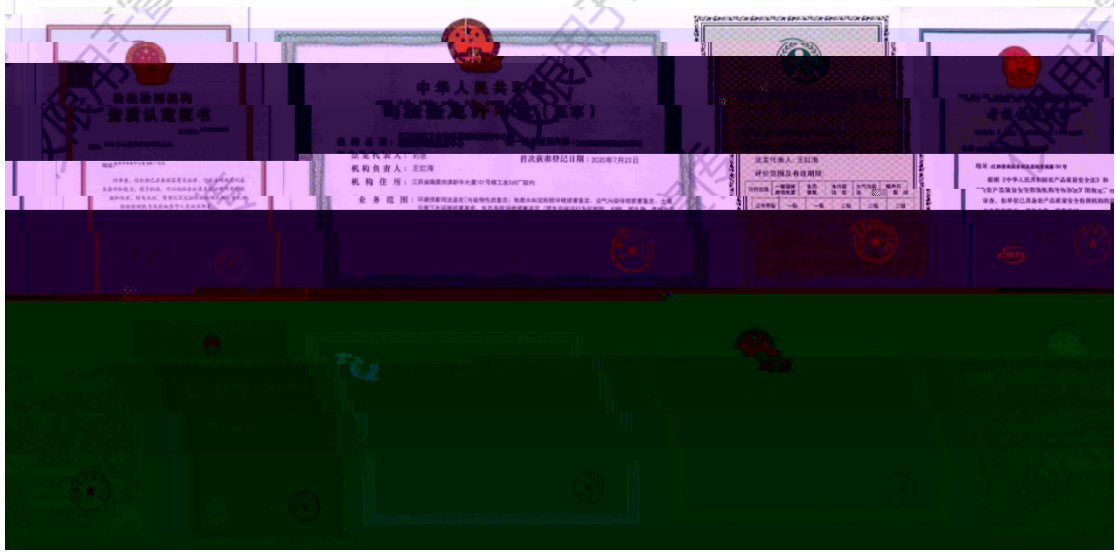
1		0.00085mg/L	0.00054mg/L	-226
	0.009Bq/L			1995
		0.00052mg/L	0.00107mg/L	0.00002mg/L
0.00108mg/L	-226	<0.00127Bq/L	0.00626Bq/L	
	-226			
2			-226	
3			-226	
4				
5				-226

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9.2 2024