Table 1. Stream-wise chemical hazards for the green methanol pathway, showing respective chemical content meeting explosion limits and exceeding acute toxicity thresholds.

Stream	CO	MeOH	H ₂	C0 ₂	Wate
1				≥5%, subtle physiological changes	+
2				≥5%, subtle physiological changes ≥5%, subtle physiological changes	-
4				≥5%, subtle physiological changes	-
5				≥5%, subtle physiological changes	-
6	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464°C ≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure	within 4%-75%, meets Explosive Limit able to explode from ignition source or fire	≥5%, subtle physiological changes	
7					
8					
9	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464°C ≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure	within 4%-75%, meets Explosive Limit able to explade from ignition source or fire	≥5%, subtle physiological changes	
10	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464°C 250,000 ppm, toxic death in 1-2 hr of prolonged exposure	within 4%-75%, meets Explosive Limit able to explode from ignition source or fire	≥5%, subtle physiological changes	
11	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure			≥5%, subtle physiological changes	
12		≥50,000 ppm, toxic			
12		death in 1-2 hr of prolonged exposure			
13		≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure			
14		≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure			
15		≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure			
16		within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464°C 250,000 ppm, toxic death in 1-2 hr of prolonged exposure			
17	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure			≥5%, subtle physiological changes	
18	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure				
19		≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure			
20	≥0.2%, toxic	≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure			_
21	unconciousness in .5 hr of prolonged exposure ≥0.2%, toxic				
22	unconciousness in .5 hr of prolonged exposure			≥5%, subtle physiological changes	
23	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure			≥5%, subtle physiological changes	
24	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure				
	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure				
26					-

Table 2. Si Stream	tream-wise chemical hazards f	for the conventional methanol pathway, show	ning respective chemical content meeting exp	losion limits and exceeding acute toxicity three	sholds. Water
1		neon	n _e		water
3	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure		within 4%-75%, meets Explosive Limit able to explode from ignition source or fire	25%, subtle physiological changes	
4	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure		within 4%-75%, meets Explosive Limit able to explode from ignition source or fire	25%, subtle physiological changes	
5	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure		within 4%-75%, meets Explosive Limit able to explode from ignition source or fire	≥5%, subtle physiological changes	
6	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 404°C ≈50,000 ppm, toxic death in 1-2 hr of prolonged exposure	within 4%-78%, meets Explosive Limit able to explode from ignition source or fire	26%, subtle physiological changes	
7					
9	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% -35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464*C 260,000 ppm, toxic death in 1-2 hr of prolonged exposure	within 4%-75%, meets Explosive Limit able to explode from ignition source or fire	≥5%, subtle physiological changes	
10	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464°C a50,000 ppm, toxic death in 1-2 hr of prolonged exposure	within 4%-75%, meets Explosive Limit able to explode from ignition source or fire	26%, subtle physiological changes	
11	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure			≥5%, subtle physiological changes	
12		≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure			
13		250,000 ppm, toxic death in 1-2 hr of prolonged exposure			
14		≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure			
15		≥50,000 ppm, toxic death in 1-2 hr of prolonged exposure			
16		within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 484°C 250,000 ppm, toxic death in 1-2 hr of prolonged exposure			
17	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure			≥5%, subtle physiological changes	
18	20.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464*C 250,000 ppm, toxic death in 1-2 hr of prolonged exposure			
19	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464*C 250,000 ppm, toxic death in 1.2 hr of prolonged exposure	within 4%-76%, meets Explosive Limit able to explode from ignition source or fire		
20		within 6% -35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464*C 250,000 ppm, toxic death in 1-2 hr of prolonged exposure	within 4%-75%, meets Explosive Limit able to explode from ignition source or fire		
21	≥0.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or a thigh pressure at 464*C >50,000 ppm, toxic death in 1-2 hr of prolonged exposure	within 4%-76%, meets Explosive Limit able to explode from ignition source or fire		
22		within 6% - 35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464*C 250,000 ppm, toxic death in 1-2 hr of prolonged exposure	within 4%-76%, meets Explosive Limit able to explode from ignition source or fire	26%, subtle physiological changes	
23	20.2%, toxic unconciousness in .5 hr of prolonged exposure	within 6% -35%, meets Explosive Limit able to explode from ignition source, fire, or at high pressures at 464*C 250,000 ppm, toxic death in 1-2 hr of prolonged exposure		26%, subtle physiological changes	