



**DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH  
(MINISTRY OF HUMAN RESOURCE)**

**SUMMARY REPORT  
HAZARDOUS CHEMICAL INVENTORY 2019 FROM  
*CHEMICAL INFORMATION MANAGEMENT SYSTEM (CIMS)***

**PREPARED BY**  
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DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH MALAYSIA

## 1. Inventory Submissions 2019

### 1.1 Number of Accounts

As of August 2020, a total 1284 accounts have been created covering all three types of accounts. The breakdown of accounts according to states and types of accounts are as follows:

Table 1: Breakdown of CIMS accounts according to states

State	Importer	Manufacturer	Importer and Manufacturer	Total	
				Number	(%)
Johor	53	56	69	178	13.9
Kedah	32	19	12	63	4.9
Kelantan	2	3	1	6	0.5
Melaka	26	19	9	54	4.2
Negeri Sembilan	20	20	20	60	4.7
Pahang	19	12	16	47	3.7
Perak	33	33	20	86	6.7
Perlis	2	3	0	5	0.4
Pulau Pinang	69	21	35	125	9.7
Sabah	18	11	17	46	3.6
Sarawak	23	33	21	77	6.0
Selangor	179	67	146	392	30.5
Terengganu	8	18	20	46	3.6
Wp KL	39	14	29	82	6.4
Wp Labuan	4	7	6	17	1.3
<b>TOTAL</b>	<b>527</b>	<b>336</b>	<b>421</b>	<b>1284</b>	<b>100.0</b>

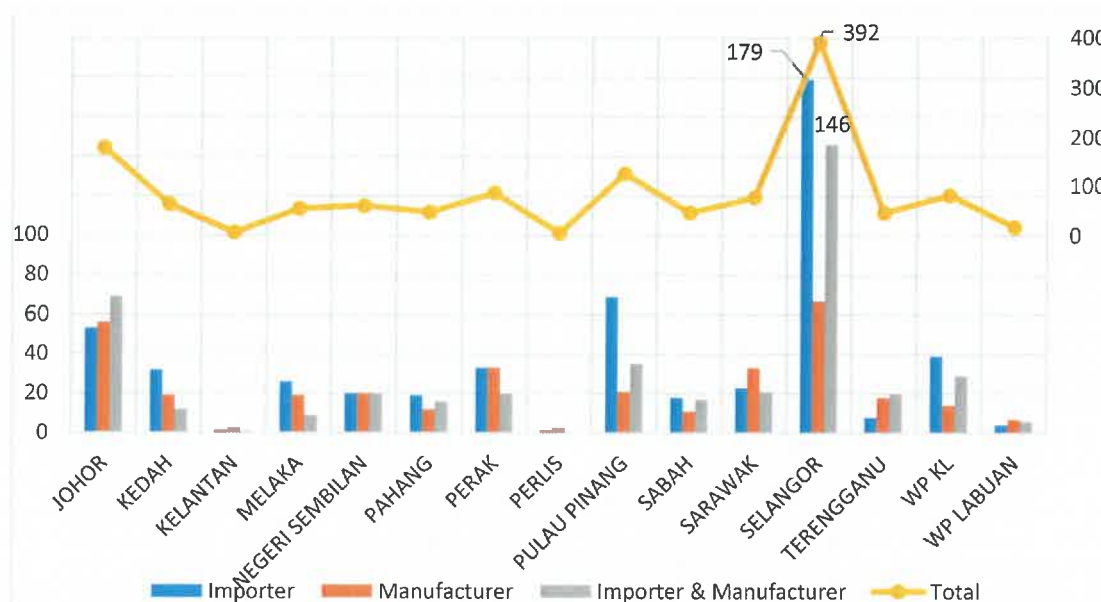


Figure 1: Number of CIMS accounts according to states

## 1.2 Total of Submission and Number of Chemicals

A total of 3913 inventory submissions for 2019 were received by the Department through CIMS until 30<sup>th</sup> June 2020. Out of these submissions, only **3399** inventories were acknowledged and the rest were rejected. Normally, the submitted inventory is rejected by the Department due to the following conditions:

- i. Incomplete inventory information (no quantity, hazard class etc.)
- ii. Duplicate inventory report for the same chemicals.

Table 2: Number of submissions and chemicals acknowledged.

	Number of inventories	Number of chemicals
<b>TOTAL</b>	<b>3399</b>	<b>69835</b>

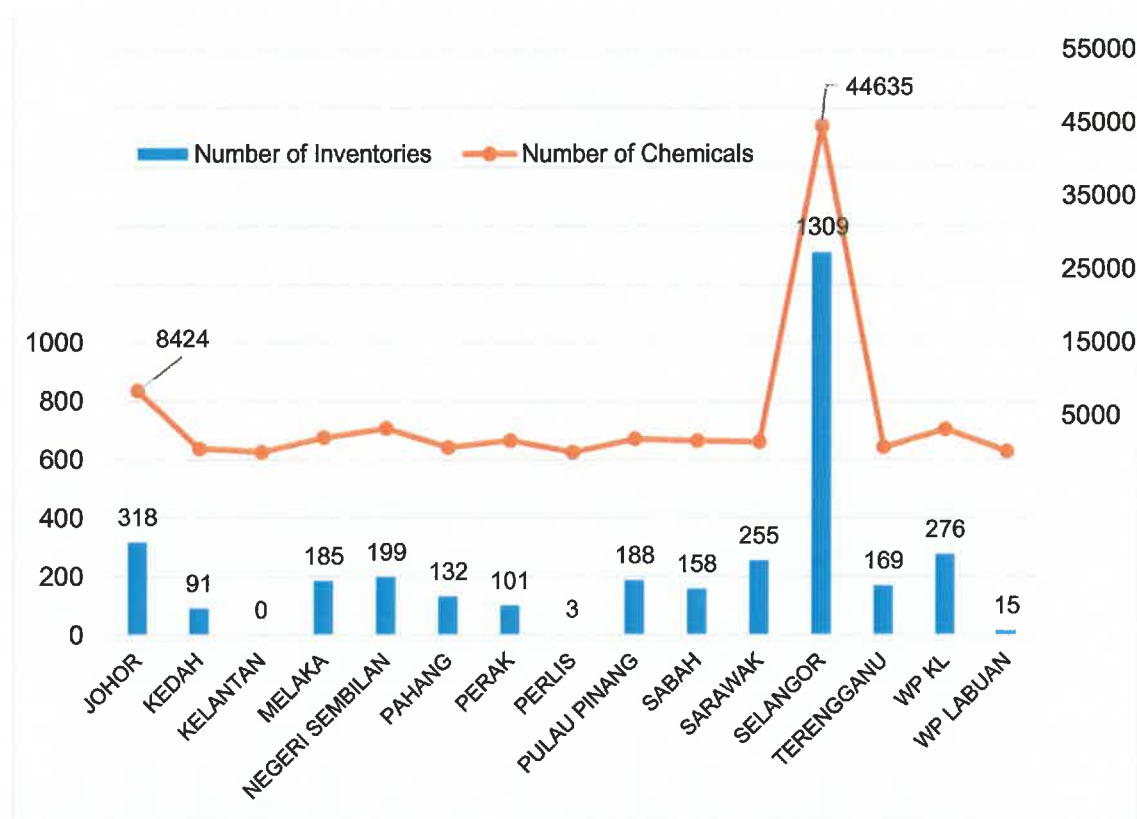


Figure 2: Number of inventory and chemicals acknowledged according to states.

### 1.3 Trend of Inventory Submission

The 2019 inventory was sent on January 1 until June 30, 2020 following the country being hit by the Covid-19 pandemic and was in control of the movement. The first inventory submitted to the Department was recorded on 01 January 2020. The number of inventories increased day by day and began to reach a peak by the last week of March. However, the trend shows a decline as most suppliers have sent inventory by March 31, 2020 and only a handful have yet to send inventory.

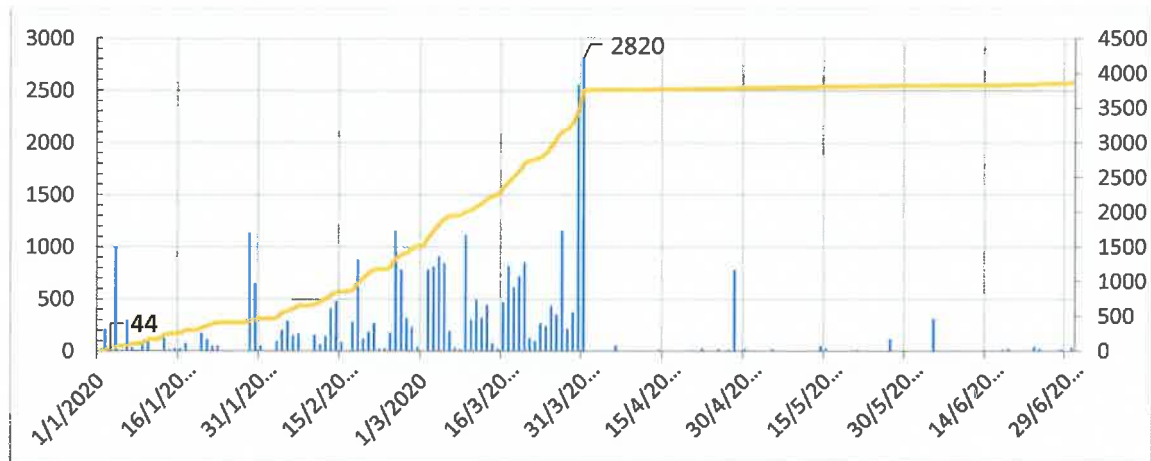


Figure 3: Trend of inventory submissions.

### 1.4 Total Quantity of Chemical in the 2019's Inventory

Table 3: Quantity of chemical according to types.

State	Substance (Tonne)		Mixture (Tonne)		Total	
	Import	Manufacture	Import	Manufacture	Tonne	(%)
<b>TOTAL</b>	<b>17,576,468</b>	<b>56,085,762</b>	<b>14,827,568</b>	<b>208,755,691</b>	<b>297,245,489</b>	<b>100</b>

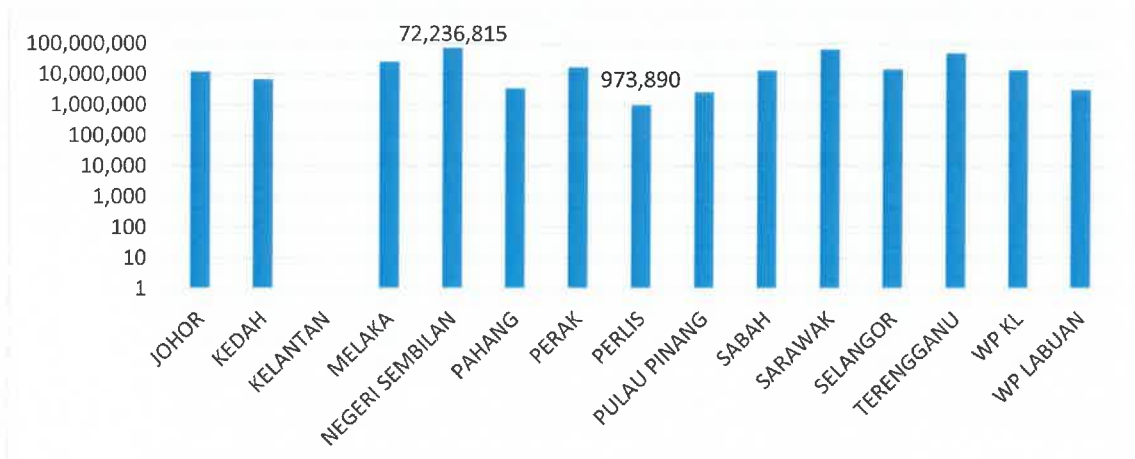


Figure 4: Quantity of chemicals imported/manufactured according to states.

## 2. Total Quantity of 2019's Inventory According to Hazard Class

### 2.1. Physical Hazard

Table 4: Total quantity of chemicals according to physical hazard classes.

	Quantity (Tonne)	≤ 100	≤ 1,000	≤ 100,000	≤ 1 M	≤ 100 M	>100 M
1.	Chemicals which, in contact with water, emit flammable gases			✓			
2.	Corrosive to metals					✓	
3.	Explosives			✓			
4.	Flammable aerosols			✓			
5.	Flammable gases					✓	
6.	Flammable liquids					✓	
7.	Flammable solids			✓			
8.	Gases under pressure					✓	
9.	Organic peroxides		✓				
10.	Oxidizing gases			✓			
11.	Oxidizing liquids				✓		
12.	Oxidizing solids				✓		
13.	Pyrophoric liquids		✓				
14.	Pyrophoric solids			✓			
15.	Self-heating chemicals		✓				
16.	Self-reactive chemicals		✓				

### 2.2. Health Hazard

Table 5: Total quantity of chemicals according to health hazard classes.

	Quantity (Tonne)	≤ 100	≤ 1,000	≤ 100,000	≤ 1 M	≤ 100 M	>100 M
1.	Acute toxicity dermal			✓		✓	
2.	Acute toxicity inhalation					✓	
3.	Acute toxicity oral			✓		✓	
4.	Aspiration hazard			✓		✓	
5.	Carcinogenicity					✓	
6.	Germ cell mutagenicity					✓	
7.	Reproductive toxicity			✓		✓	
8.	Respiratory sensitisation					✓	
9.	Serious eye damage/eye irritation		✓				✓
10.	Skin corrosion/irritation			✓			✓
11.	Skin sensitisation				✓	✓	
12.	Specific target organ toxicity-repeated exposure				✓	✓	
13.	Specific target organ toxicity-single exposure		✓				✓

### 2.3. Environmental Hazard

Table 6: Total quantity of chemicals according to environmental hazard classes.

	Quantity (Tonne)	≤ 100	≤ 1,000	≤ 100,000	≤ 1 M	≤ 100 M	>100 M
1.	Hazardous to the aquatic environment-acute hazard					✓	
2.	Hazardous to the aquatic environment-chronic hazard					✓	
3.	Hazardous to the ozone layer			✓			

### 3. Comparison of Inventory 2015 to 2019

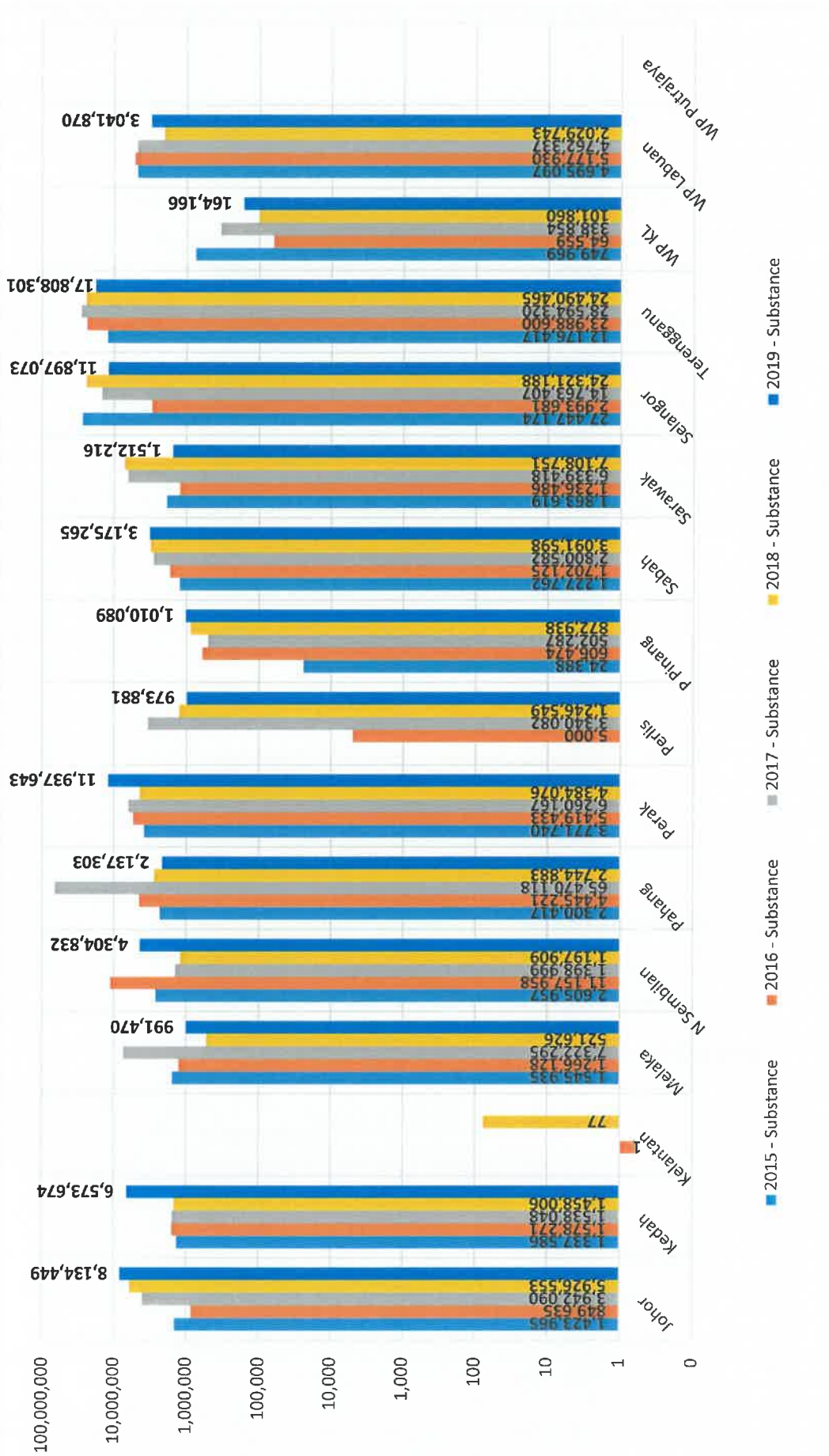


Figure 5: Total hazardous chemicals (substance) in 2015 to 2019 according to states (in tonnes)

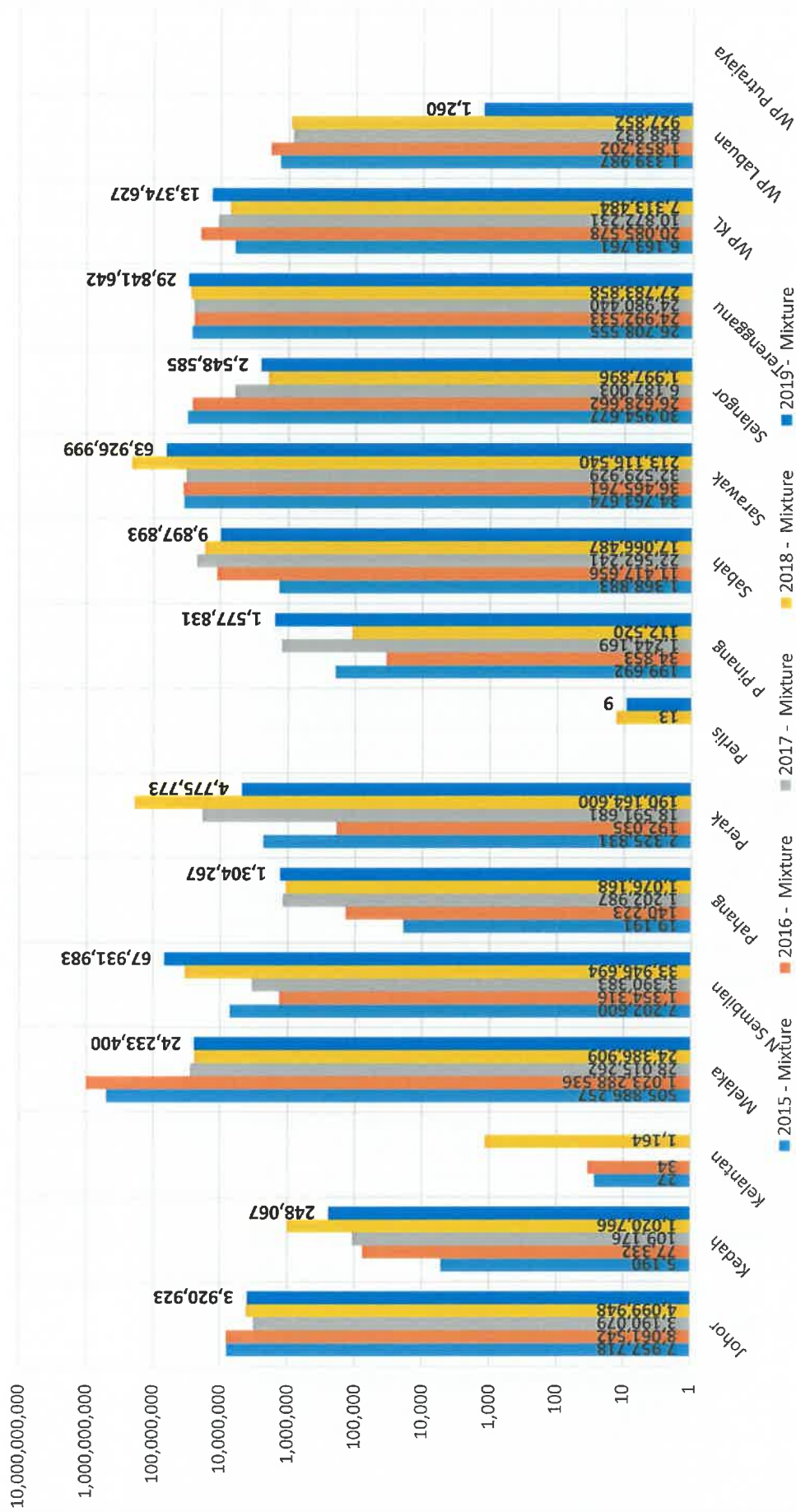


Figure 6: Total hazardous chemicals (mixtures) in 2015 to 2019 according to states (in tonnes)



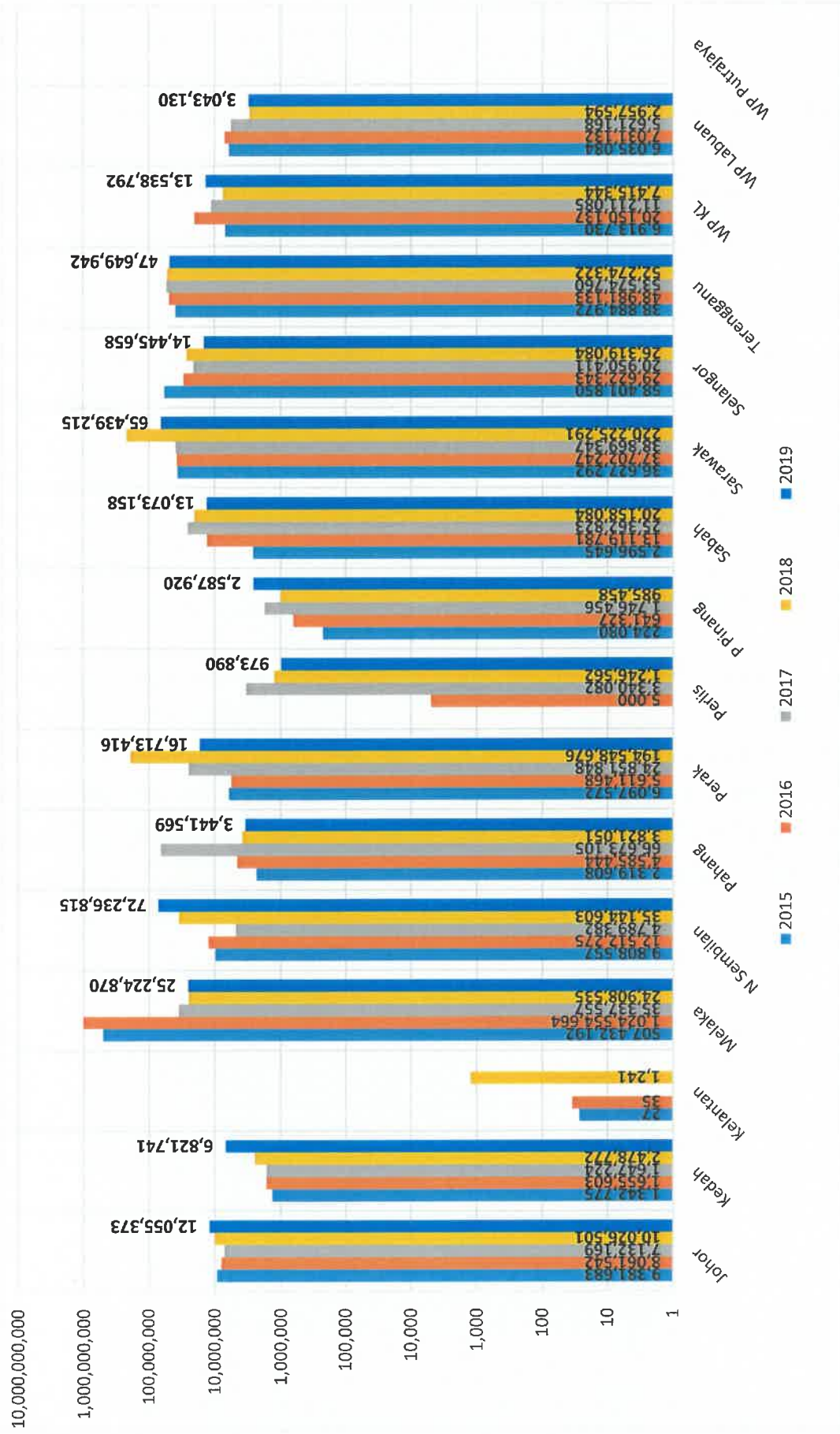


Figure 7: Total hazardous chemicals in 2015 to 2019 according to states (in tonnes)

#### **4. Summary**

In conclusion, data obtained from inventories submitted through CIMS indicate that the quantity of hazardous chemicals imported and manufactured to be supplied for use at the workplace is high and has the potential of bringing significant impact on the safety and health of workers and the public. Since the inventory submission received through CIMS came from all states in Malaysia, it indicates that hazards from chemicals exist all over Malaysia, and are not specific to states which are categorised as industrial states.

In line with that, suitable safety and health measures should be devised as to minimise the after effect of hazardous chemicals on those involved. At the same time, all agencies involved in chemical management in Malaysia, should come up with drastic and practical measures including tightening the importation procedure in Malaysia.

In addition, the department and the country need to look closely correlation between CIMS statistics obtained with the locations of hazardous chemicals. This can be done through mapping activities and other mechanism.

The Department believes that the effort of controlling and managing hazardous chemicals is not an easy task that can be accomplished in the blink of an eye. Therefore, comprehensive measures involving multiple agencies need to be ascertained to face the challenges of chemical management in Malaysia. From a different angle, the gathering of information as implemented by CIMS will continue to be streamlined so that the statistics shown are more realistic and reflect the actual entry and production of chemicals in Malaysia.