



Content

DISCLAIMER	7
RESEARCH METHODOLOGY	8
1. WORLD BISMUTH MARKET	9
1.1. Bismuth in Global Industry	9
1.2. Bismuth Market Overview	11
1.3. Bismuth Prices	14
2. NORTH AMERICAN MARKET OF BISMUTH	16
2.1. USA	16
2.2. Canada	21
2.3. Mexico	25
3. LATIN AMERICAN MARKET OF BISMUTH	28
3.1. Bolivia	28
3.2. Peru	30
4. EUROPEAN MARKET OF BISMUTH	33
4.1. European Union Market of Bismuth	33
4.1.1. Bulgaria	33
4.1.2. Romania	36
4.2. CIS Market of Bismuth	38
4.2.1. Russia	38
4.2.2. Kazakhstan	42
5. ASIAN AND MIDDLE EAST MARKET OF BISMUTH	45
5.1. China	45
5.2. Japan	49
6. OCEANIAN MARKET OF BISMUTH	52
6.1. Australia	52
7. FUTURE OUTLOOK (2012-2016)	54



List of tables

Table 1.	World mine reserves of bismuth, 2011 (metric tons of bismuth content)	10
Table 2.	World production of bismuth, 2006-2011 (metric tons of bismuth content)	11
Table 3.	World mine production of bismuth, 2010-2011 (metric tons of bismuth content)	11
Table 4.	World refinery production of bismuth, 2010-2011 (metric tons of bismuth content)	12
Table 5.	Price for Bismuth, domestic dealer, year average, 2006-2011 (USD/LB)	14
Table 6.	Bismuth production and consumption in USA, 2006-2010 (metric tons of bismuth content)	16
Table 7.	Export and import of Bismuth and articles thereof, including waste and scrap in USA, 2005-2010	17
Table 8.	Structure of Bismuth and articles thereof, including waste and scrap export by USA in 2009-2010	18
Table 9.	Structure of Bismuth and articles thereof, including waste and scrap import by USA in 2009-2010	19
Table 10.	Bismuth production and consumption in Canada, 2006-2011 (metric tons of bismuth content)	21
Table 11.	Export and import of Bismuth and articles thereof, including waste and scrap in Canada, 2005-2010	22
Table 12.	Structure of Bismuth and articles thereof, including waste and scrap export by Canada in 2009-2010	22
Table 13.	Structure of Bismuth and articles thereof, including waste and scrap import by Canada in 2009-2010	23
Table 14.	Bismuth production and consumption in Mexico, 2006-2011 (metric tons of bismuth content)	25
Table 15.	Export and import of Bismuth in Mexico, 2005-2010	26
Table 16.	Structure of Bismuth export by country in Mexico in 2009-2010	26
Table 17.	Structure of Bismuth import by country in Mexico in 2009-2010	27
Table 18.	Bismuth production and consumption in Bolivia, 2006-2011 (metric tons of bismuth content)	28
Table 19.	Export and import of Bismuth in Bolivia, 2005-2010	28
Table 20.	Structure of Bismuth import by country in Bolivia in 2009-2010	29
Table 21.	Bismuth production and consumption in Peru, 2006-2011 (metric tons of bismuth content)	30
Table 22.	Export and import of Bismuth in Peru, 2005-2010	31
Table 23.	Structure of Bismuth export by country in Peru in 2009	31
Table 24.	Structure of Bismuth import by country in Peru in 2009-2010	32
Table 25.	Bismuth production and consumption in Bulgaria, 2006-2011 (metric tons of bismuth content)	33
Table 26.	Export and import of Bismuth in Bulgaria, 2005-2010	34
Table 27.	Structure of Bismuth export by country in Bulgaria in 2010	34



Table 28.	Structure of Bismuth import by country in Bulgaria in 2009-2010	35
Table 29.	Bismuth production and consumption in Romania, 2006-2011 (metric tons of bismuth content)	36
Table 30.	Export and import of Bismuth in Romania, 2005-2010	36
Table 31.	Structure of Bismuth import by country in Romania in 2009-2010	37
Table 32.	Bismuth production and consumption in Russia, 2006-2011 (metric tons of bismuth content)	38
Table 33.	Export and import of Bismuth and articles thereof, including waste and scrap in Russia, 2005-2010	39
Table 34.	Structure of Bismuth and articles thereof, including waste and scrap export by Russia in 2009-2010	39
Table 35.	Structure of Bismuth and articles thereof, including waste and scrap import by Russia in 2009-2010	40
Table 36.	Bismuth production and consumption in Kazakhstan, 2006-2011 (metric tons of bismuth content)	42
Table 37.	Export and import of Bismuth in Kazakhstan, 2005-2010	42
Table 38.	Structure of Bismuth export by country in Kazakhstan in 2009-2010	43
Table 39.	Structure of Bismuth import by country in Kazakhstan in 2009-2010	43
Table 40.	Bismuth production and consumption in China, 2006-2011 (metric tons of bismuth content)	45
Table 41.	Export and import of Bismuth in China, 2005-2010	46
Table 42.	Structure of Bismuth export by country in China in 2009-2010	46
Table 43.	Structure of Bismuth import by country in China in 2009-2010	47
Table 44.	Bismuth production and consumption in Japan, 2006-2011 (metric tons of bismuth content)	49
Table 45.	Export and import of Bismuth in Japan, 2006-2011	49
Table 46.	Structure of Bismuth export by country in Japan in 2010-2011	50
Table 47.	Structure of Bismuth import by country in Japan in 2010-2011	51
Table 48.	Export and import of Bismuth and articles thereof, including waste and scrap in Australia, 2005-2010	52
Table 49.	Structure of Bismuth and articles thereof, including waste and scrap export by Australia in 2009-2010	53
Table 50.	Structure of Bismuth and articles thereof, including waste and scrap import by Australia in 2009-2010	53
Table 51.	Bismuth market forecasts (2012-2016)	54



List of figures

Figure 1.	Structure of world bismuth reserves, by country, 2011	10
Figure 2.	Trend of world bismuth production, 2006-2011 (metric tons of bismuth content)	11
Figure 3.	Structure of mine production of bismuth, by country, 2011	12
Figure 4.	Structure of refinery production of bismuth, by country, 2011	13
Figure 5.	Price trend for Bismuth Ingot 99,99%, FOB USA Warehouse, 2006-2011 (USD/LB)	14
Figure 6.	Price trend for Bismuth 99,9%, Ingots, CIF Warehouse Rotterdam, 2007-2011 (USD/LB)	15
Figure 7.	Price trend for Bismuth 99,99%, China Domestic Market, 2008-2011 (USD/LB)	15
Figure 8.	Bismuth production and consumption trends in USA, 2006-2011 (metric tons of bismuth content)	16
Figure 9.	Structure of bismuth consumption in USA, by end use, 2011.	17
Figure 10.	Export and import dynamics of Bismuth and articles thereof, including waste and scrap in USA in 2005-2010, tons	18
Figure 11.	Trade balance of Bismuth and articles thereof, including waste and scrap in USA in 2005-2010, tons	18
Figure 12.	Bismuth production and consumption trends in Canada, 2006-2011 (metric tons of bismuth content)	21
Figure 13.	Export and import dynamics of Bismuth and articles thereof, including waste and scrap in Canada in 2005-2010, tons	22
Figure 14.	Trade balance of Bismuth and articles thereof, including waste and scrap in Canada in 2005-2010, tons	22
Figure 15.	Bismuth production and consumption trends in Mexico, 2006-2011 (metric tons of bismuth content)	25
Figure 16.	Export and import dynamics of Bismuth in Mexico in 2005-2010, tons	26
Figure 17.	Trade balance of Bismuth in Mexico in 2005-2010, tons	26
Figure 18.	Bismuth production and consumption trends in Bolivia, 2006-2011 (metric tons of bismuth content)	28
Figure 19.	Export and import dynamics of Bismuth in Bolivia in 2005-2010, tons	29
Figure 20.	Trade balance of Bismuth in Bolivia in 2005-2010, tons	29
Figure 21.	Bismuth production and consumption trends in Peru, 2006-2011 (metric tons of bismuth content)	30
Figure 22.	Export and import dynamics of Bismuth in Peru in 2005-2010, tons	31
Figure 23.	Trade balance of Bismuth in Peru in 2005-2010, tons	31
Figure 24.	Bismuth production and consumption trends in Bulgaria, 2006-2011 (metric tons of bismuth content)	33
Figure 25.	Export and import dynamics of Bismuth in Bulgaria in 2005-2010, tons	34
Figure 26.	Trade balance of Bismuth in Bulgaria in 2005-2010, tons	34
Figure 27.	Bismuth production and consumption trends in Romania, 2006-2011 (metric tons of bismuth content)	36



Figure 28. Export and import dynamics of Bismuth in Romania in 2005-2010, tons	37
Figure 29. Trade balance of Bismuth in Romania in 2005-2010, tons	37
Figure 30. Bismuth production and consumption trends in Russia, 2006-2011 (metric tons of bismuth content)	38
Figure 31. Export and import dynamics of Bismuth and articles thereof, including waste and scrap in Russia in 2005-2010, tons	39
Figure 32. Trade balance of Bismuth and articles thereof, including waste and scrap in Russia in 2005-2010, tons	39
Figure 33. Bismuth production and consumption trends in Kazakhstan, 2006-2011 (metric tons of bismuth content)	42
Figure 34. Export and import dynamics of Bismuth in Kazakhstan in 2005-2010, tons	43
Figure 35. Trade balance of Bismuth in Kazakhstan in 2005-2010, tons	43
Figure 36. Bismuth production and consumption trends in China, 2006-2011 (metric tons of bismuth content)	45
Figure 37. Export and import dynamics of Bismuth in China in 2005-2010, tons	46
Figure 38. Trade balance of Bismuth in China in 2005-2010, tons	46
Figure 39. Bismuth production and consumption trends in Japan, 2006-2011 (metric tons of bismuth content)	49
Figure 40. Export and import dynamics of Bismuth in Japan in 2006-2011, tons	50
Figure 41. Trade balance of Bismuth in Japan in 2006-2011, tons	50
Figure 42. Export and import dynamics of Bismuth and articles thereof, including waste and scrap in Australia in 2005-2010, tons	52
Figure 43. Trade balance of Bismuth and articles thereof, including waste and scrap in Australia in 2005-2010, tons	52
Figure 44. Bismuth market growth trend till 2016 (metric tons bismuth content)	55
Figure 45. Bismuth price trend till 2016 (dollars per lb)	55



1.2. Bismuth Market Overview

World mine production of bismuth in 2011 was estimated to be 000 metric tons of bismuth content, a 4.5% decrease from that in 2010.

World refinery production in 2011 increased to 000 metric tons of bismuth content.

Table 1. World production of bismuth, 2006-2011 (metric tons of bismuth content)

	2006	2007	2008	2009	2010	2011
Mine						
Refinery						

Figure 1. Trend of world bismuth production, 2006-2011 (metric tons of bismuth content)

Table 2. World mine production of bismuth, 2010-2011 (metric tons of bismuth content)

Country	2010	2011
Bolivia		
Canada		
China		
Kazakhstan		
Mexico		
Peru		
Other countries		
World total (rounded)		

Figure 2. Structure of mine production of bismuth, by country, 2011



In 2011 China was the world's leading producer of mine and refined bismuth with 71% and 81% of the world total respectively.

Table 3. World refinery production of bismuth, 2010-2011 (metric tons of bismuth content)

Country	2010	2011
Belgium		
Canada		
China		
Japan		
Mexico		
Peru		
Other countries		
World total (rounded)		

Figure 3. Structure of refinery production of bismuth, by country, 2011



1.3. Bismuth Prices

The price of bismuth started 2011 at \$...

Table 4. Price for Bismuth, domestic dealer, year average, 2006-2011 (USD/LB)

2006	2007	2008	2009	2010	2011

Figure 4. Price trend for Bismuth Ingot 99,99%, FOB USA Warehouse, 2006-2011 (USD/LB)

Figure 5. Price trend for Bismuth 99,9%, Ingots, CIF Warehouse Rotterdam, 2007-2011 (USD/LB)

Figure 6. Price trend for Bismuth 99,99%, China Domestic Market, 2008-2011 (USD/LB)



5.2. Japan

In 2011 mine production of bismuth in Japan was estimated to be 000 metric tons of bismuth content.

Refinery production in 2011 was to 000 metric tons of bismuth content.

Table 5. Bismuth production and consumption in Japan, 2006-2011 (metric tons of bismuth content)

	2006	2007	2008	2009	2010	2011
Production						
Mine						
Refinery						
Consumption						

Figure 7. Bismuth production and consumption trends in Japan, 2006-2011 (metric tons of bismuth content)

Table 6. Export and import of Bismuth in Japan, 2006-2011

	2006	2007	2008	2009	2010	2011
Export, thousand \$						
Export, tons						
Import, thousand \$						
Import, tons						
Trade balance, tons						

Figure 8. Export and import dynamics of Bismuth in Japan in 2006-2011, tons

Figure 9. Trade balance of Bismuth in Japan in 2006-2011, tons



Table 7. Structure of Bismuth export by country in Japan in 2010-2011

Period / Japan - Partner	Trade value, \$	Net weight, kg	Average price, \$/kg	Country share,%
2010 total including: Rep. of Korea China Viet Nam China, Hong Kong SAR USA India Malaysia Other Asia, nes France Thailand				
2011 total including: Rep. of Korea China Viet Nam China, Hong Kong SAR Philippines Thailand India Other Asia, nes Malaysia Indonesia				



Table 8. Structure of Bismuth import by country in Japan in 2010-2011

Period / Japan - Partner	Trade value, \$	Net weight, kg	Average price, \$/kg	Country share,%
2010 total including: China Rep. of Korea Mexico Belgium USA United Kingdom				
2011 total including: China Rep. of Korea USA Belgium				