

ANALYZING MEASUREMENTS OF VOLUME OF SOUND IN DIFFERENT PLACES AND COUNTRIES (Slovenia, Spain, Iceland)

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INTRODUCTION

Our assignment was to measure the volume of sound in different places and in different countries. Due to current conditions we decided that the best choice is to measure the volume of sound in seven different scenarios:

- In the house
- On the balcony/in the garden
- The volume of the voice
- The volume of traffic from the balcony
- The volume of traffic (we can get those informations from the internet)
- In a forest

We measured these information for four days (some did it for seven). Each day in all places, at around the same time.

OUR GOAL

Our research goal is to report the measurements and compare them to the others.

MATERIALS AND METHODS

For our task we used an app called Sound meter that we installed for free on our phones.

First, we measured all these sounds. The results were reported into tables.

We compared the results from Slovenia, Spain (both in the house in the mountains and in the city) and Iceland.

RESULTS

RESULTS FROM SLOVENIA

SLOVENIA						
day	House	Balcony	TRAFFIC	House/Traffic	Voice	Forrest
1	52,3 dB	64,5 dB	70 dB- 80 dB	69,2 dB	65,6 dB	34,2 dB
2	55,4 dB	63,3 dB		71,6 dB	65,6 dB	36,6 dB
3	57,6 dB	67,6 dB		72,3 dB	65,6 dB	33,4 dB
4	56,2 dB	66,8 dB		69,6 dB	65,6 dB	31,4 dB

Average value of volume of sounds in Slovenia in the house was 55,4 dB, on the balcony 49,7 dB, of the traffic 75 dB. The volume of sound of the traffic from the balcony was 70,7 dB, of the voice 65,6 dB and of the forest 33,9 dB.

RESULTS FROM SPAIN

SPAIN						
HOUSE AT THE MOUNTAINS						
day	House	Balcony	TRAFFIC	House/Traffic	Voice	Forrest
1	31 dB	45 dB	Fluid	55 dB	62 dB	34 dB
2	26 dB	55 dB	Fluid	62 dB	66 dB	33 dB
3	35 dB	38 dB	Fluid	53 dB	69 dB	35 dB
4	24 dB	33 dB	Fluid	54 dB	69 dB	38 dB
5	24 dB	35 dB	Fluid	53 dB	74 dB	50 dB
6	22 dB	32 dB	Fluid	50 dB	68 dB	33 dB
7	34 dB	48 dB	Fluid	55 dB	61 dB	44 dB

Average value of volume of sounds in Spain in the house in the mountains was 28 dB, on the balcony 40,8 dB (the traffic was fluid). The volume of sound of the traffic from the balcony was 54,6 dB, of the voice 67 dB and of the forest 38,1 dB.

SPAIN						
HOUSE IN THE CITY						
day	House	Balcony	TRAFFIC	House/Traffic	Voice	Forrest
1	38 dB	50 dB	No fluid	49 dB	67 dB	X
2	39 dB	45 dB	No fluid	50 dB	66 dB	X
3	34 dB	40 dB	No fluid	51 dB	65 dB	X
4	46 dB	46 dB	No fluid	50 dB	68 dB	X
5	38 dB	40 dB	No fluid	48 dB	66 dB	X
6	41 dB	50 dB	No fluid	50 dB	64 dB	X
7	35 dB	43 dB	No fluid	49 dB	66 dB	X

Average value of the volume of sounds in Spain in the house in the city was 38,7 dB, on the balcony 44,8 dB (the traffic was not fluid or there was no traffic). The volume of sound of the traffic from the balcony was 49,9 dB, of the voice 66 dB and from the forest there was no sounds.

RESULTS FROM ICELAND

ICELAND - REYKJAVÍK						
DATE	PLACE					
	House	Balcony	TRAFFIC	House/Traffic	Voice	Forrest
20.mar	29,7 dB	53,8 dB	79,2 dB	56,9 dB	71,2 dB	51,6 dB
21.mar	37,4 dB	52,2 dB	74,2 dB	55 dB	72,4 dB	51,4 dB
22.mar	35,2 dB	52,7 dB	71,3 dB	55,5 dB	72,5 dB	50,3 dB
23.mar	28 dB	54,1 dB	78,9 dB	57,7 dB	71 dB	52,9 dB

Average value of the volume of sounds in Iceland in the house was 32,6 dB, on the balcony 53,2 dB and of the traffic 75,9 dB. The volume of the sound of the traffic from the balcony was 56,3 dB, of the voice 71,3 dB and in the forest 51,6 dB.

CONCLUSIONS

From our results, we can conclude that the highest measurement of the volume of sound in the house was in a Slovenian house. The lowest was in Spain in a house in the mountains.

The noisy environment is the most probable explanation of the highest measurement on the balcony in Iceland in the capital city Reykjavik. On the other hand, the volume of sound in the house in the mountains in Spain was the lowest.

Also the traffic was the loudest in Iceland. Reykjavik is the capital city and there's a lot of people and traffic. The lowest was in the city in Spain.

The measurements of volume of the traffic from the balcony was in Slovenia. The lowest in Spain from the balcony of the house in the city.

The loudest voice was in Iceland, and the quietest in Spain in the city.

The noisiest forest was in Iceland and the quietest in Spain in the city where there was no forest.



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