

EFFECTIVENESS OF NAZAVA WATER FILTER IN REDUCING TURBIDITY

2020, Bandung Indonesia

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1. OBJECTIVE

Determine the effectiveness of the Nazava Ceramic Filter element in reducing turbidity.

2. METHOD

2.1. Tools

- Beaker Glass
- Nazava Small Water Filter
- Measuring Pipette
- A set of WGZ-20B Turbidimeter Tool

2.2. Materials

- High Turbid Water obtained from backwashing a sand filter that filters shallow well water at Jalan Budi Raya XVI no 2, 40511 Cimahi Indonesia
- Faucet Water
- Demineralized Water

2.3. Procedure

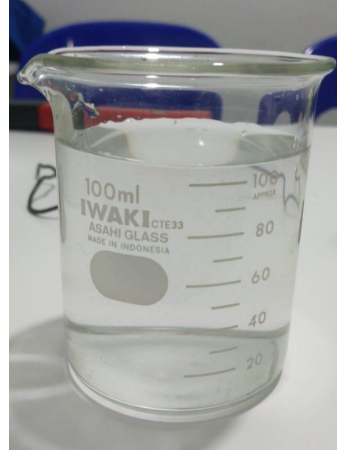
- Turbidity was measured of the raw water according to User Instructions of Turbidimeter
- The raw water was filtered with a Nazava Small Water filter
- The turbidity of the filtered water was measured

3. RESULT AND DISCUSSION

Determination of turbidity aims to determine the effectiveness of the Nazava Ceramic filter element in reducing turbidity. The turbidimeter that we used is the WGZ-B20 type. This tool measures the NTU range from 0 to 20 NTU. The concentrated washback water cannot be measured by this tool, so it was diluted with water to determine the turbidity.

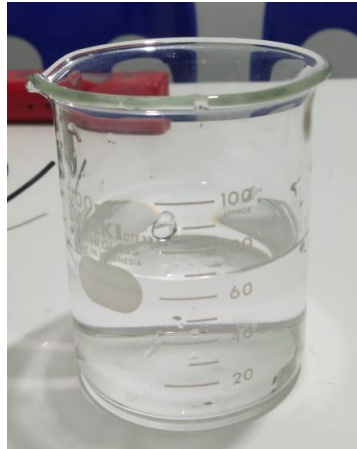


High Turbidity Water



Diluted Water

It can be seen from the image that the high turbidity water value is 279.7 NTU. The turbidity value was obtained from a dilution of 250mL of water. The value of 19.02 NTU was obtained from the results of the dilution with the following calculation : $M_1 \times V_1 = M_2 \times V_2$, $M_1 \times 17 \text{ mL} = 19.02 \text{ NTU} \times 250 \text{ mL}$, $M_1 = 279.7 \text{ NTU}$



Filtered Water

After filtration the turbidity was reduced to the value of 1.55 NTU. These results indicate that the Nazava Ceramic filter can filter water up to at least turbidity level of 279.7 NTU.

4. CONCLUSION

The Nazava water filter can reduce the turbidity from 279.7 NTU to 1.55 NTU.