



Beautifies and enhances Water Quality!

Areas of Comparison	3DM Bacto-Sand	Harvested Sand
1. Eco-Friendliness	Eco-friendly and manufactured. Reduces the need for mining of sand and avoids needless destruction of natural ecology.	Harvested from nature which destroys natural ecology and prohibit it from recovering.
2. Supply	Manufactured source ensures stable supply.	Unstable supply with increasing government controls and regulations on the export of sand.
3. Quality of Sand	Manufacturing allows us to provide Bacto-Sand of a stable and consistent quality.	Inconsistent quality depends on the country's harvesting and storage methods.
4. Free from Contamination	a. No pest, predators, hitchhikers and parasites. b. Does not carry harmful bacteria and virus.	<ul> <li>a. May contain pest, predators, hitchhikers, unwanted creatures and parasites. They could cause problems when introduced into the hobbyist's tank.</li> <li>b. It might carry harmful bacteria and virus depending on the source.</li> </ul>
5. Porosity	Multi-step processing that ensures that Bacto-Sand possesses high porosity, slow demineralization and naturally inert.	Porosity depends on the place where the natural sand is harvested and the way it is processed.
6. Structure	Bacto-Sand's unique structure is high in porosity, making it ideal as a filter sand-bed.	Harvested sand comes in different structures depending on the source.

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7. Shape	Spherical shape encourages better water flow, minimizes dead water and zone, and increases nitrification process.  *During maintenance, it can save at least 70% of the time. When using a siphon tube, the spherical balls are easily moved which allows the dirt and debris to be easily removed.	Natural shape. There are dead water and zone.  Natural sand comes in many shapes and sizes, usually compacting resulting in poor water flow. The lack of oxygen in those areas ( also known as dead zone ) creates Hydrogen Sulfide, poisonous gas.  *It takes a long time during maintenance. More than often, the sand bed becomes easily harden.
8. Effective Surface Area	More than 1000m <sup>2</sup> /l of effective surface area for beneficial bacteria to colonize. It is 20 to 80 times higher than natural rock.	Almost 15m²/l - 100m²/l of effective surface area.
9. Depositing Rate	Fast depositing rate. New setups needs only 2 - 3 hours for water to be clear.	Slow depositing rate due to fine sand particles and impurities.  New setups need 1 - 3 days for water to clear.
10. Environmental Laws	Easily exported / imported as it is manufactured.	Increasing government restrictions on naturally harvested sand, as it is considered illegal and needs license to import / export.



Cross section showing cavities.

