Procedure for free hanging tests:

1. Hang rod from 4 isolated simple supports.

2. Attach piezo electric sensor (contact microphone) to the exact midpoint of the hanging rod

3. Place audio microphone recorder (cell phone) at center of hanging rod.

4. Strike rod longitudily with a metal (from an endpoint) and record incident vibrations using both the audio recorder and contact microphone.

5. Strike the rod longitudily with a rubber mallet and repeat the above process

6. Repeat striking process for a transverse wave (strike the side of the rod) near the endpoint of the rod

7. Place contact and audio microphones at the end point of the rod

8. Repeat steps 4-6 for the end point data.