

tioned in the U. S. Pharmacopeia. Happily it was not thought best to include industrial chemistry.

The book is concisely written in good English, and is embellished with eight colored plates, representing sixty-four reactions very useful to the student, and by no means easy to produce; they seem very good.

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### NOTES.

*Note on a Molding-sand.*—A number of years ago a bed of excellent molding-sand was discovered in Belmont County, Ohio, near the Ohio river. It was, in fact, pronounced almost an ideal sand for heavy castings, and so popular was it with foundrymen, that the bed is now about exhausted, and has been closed by the owner.

The sand, when taken from the bed, coheres in lumps, is dark colored and rather coarse-grained. The grains consist of a rounded quartz nucleus, covered with a coating of brownish-red clay, that seems to adhere closely to the quartz, but dissolves when the sand is treated with hydrochloric acid, leaving the pure white nucleus behind.

The sand, even when rammed in a mold, is very porous, readily permitting the escape of gases, it is strongly cohesive, and will not blister or scale off when the molten metal flows over it. Most sands used for making heavy castings soon have the life burnt out of them; but it is said that this sand is wonderfully tough and durable.

Few sands possess, along with other good qualities, this desideratum of life-length.

Whether the good qualities of this particular sand are due to its physical condition, or to its chemical composition, or, as seems likely, to both, the writer cannot say.

An analysis of the sand, dried at 100° C., follows:

Free silica .....	73.47	per cent.
Combined silica .....	5.30	" "
Alumina .....	12.86	" "
Ferric oxide.....	3.97	" "
Lime.....	0.62	" "
Magnesia.....	0.60	" "
Organic and water .....	3.13	" "

Total..... 99.95